

ANTHRAX, LIVESTOCK - ZIMBABWE (MASHONALAND EAST, MASVINGO)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 10 Jan 2007

From: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

Source: All Africa [edited]

<<http://allafrica.com/stories/200701100161.html>>

The Veterinary Services Department has reported that outbreaks of anthrax have been reported in Mashonaland East and Masvingo provinces. In an interview on Monday, acting principal director in the department, Dr Unesu Ushewokunze-Obatolu, said anthrax cases had been reported in Hwedza, which she described as a traditional area for the disease, Musami and Chivi.

"Although I do not have the exact figures of animals that have succumbed to the disease, I can confirm that there have been fresh anthrax outbreaks apart from the ones which we recorded in Goromonzi in December 2006," said Dr Ushewokunze-Obatolu.

She said efforts to contain the outbreak were being hampered by lack of foreign currency to import the anthrax vaccine.

Dr Ushewokunze-Obatolu said the situation was being worsened by the fact that farmers were failing to immunise their livestock against the disease. She stressed that it was farmers' responsibility to do so. In December 2006, 3 people and an undisclosed number of livestock were reported to have died from anthrax in Goromonzi.

Dr Ushewokunze-Obatolu said tick-borne diseases such as redwater and heartwater were also taking a toll on the national herd due to increased tick activity with the advent of the summer season. Cases of livestock succumbing to lumpy skin disease have been recorded countrywide.

ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[It seems that the normal system is for farmers to buy the vaccines locally and not import them from South Africa. With the breakup of the large commercial farms and herds through land expropriations, the normal organised market for livestock vaccines has been eviscerated in Zimbabwe. We can assume that this disorganised situation will continue for the foreseeable future. - Mod.MHJ]

ANTHRAX, HUMAN, BOVINE - AUSTRALIA (VICTORIA)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Mon 5 Feb 2007 04:14:31 -0800 (PST)

From: Brent Barrett <[salbrent@sbcglobal.net](mailto:salbrent@sbcglobal.net)>

Source: News.com.au/AAP [edited]

<<http://www.news.com.au/story/0,23599,21175026-2,00.html>>

A 34-year-old Victorian knackery [or renderer] worker infected with anthrax is recovering in hospital after handling cattle carcasses affected with the bacteria. The afflicted knackery worker is being treated in hospital with an antibiotic drip and is expected to make a full recovery.

In the 1st [apparently human] case in the state for 10 years, the man was diagnosed with a skin infection from anthrax early last week [28 Jan - 3 Feb 2007].

Over the past few weeks, 25 cattle have been affected with the disease on four farms in the Stanhope area in the state's north. The state's chief veterinary officer Hugh Millar was quick to allay fears over the potentially deadly disease. Dr. Millar said the bacteria have existed in Australia for the past 150 years and incidents commonly occurred in warmer months when cattle forage deeper into the soil. "This is an incident which is, from our point of view, routine," Dr. Millar said. "We have sporadic incidents like this once or twice a year, every year. "Fortunately naturally occurring anthrax in animals is quite a simple thing to contain."

Dr. Millar said the cattle sent to the Stanhope knackery, where the worker was infected, were not known to be affected with the disease when they were dispatched there.

However, Dr. Millar acknowledged there had been cases of affected cattle in the Stanhope area before the worker was infected with anthrax. A Department of Human Services spokesman said the last case of anthrax in a human was in Tatura in February 1997.

Brent Barrett  
Indianapolis, Indiana  
<salbrent@sbcglobal.net>

[When anthrax falls into the background, the ongoing low-frequency sporadic cases routinely get missed if there is not a procedure in place to routinely check unexpected deaths. This appears to be the case here. And thus, instead of the disease disappearing, which it should when there are proper control procedures in place, it persists with the capacity to produce multiple cases on more than one site. And spread yet again. Soil recontamination just allows it to persist and to produce new cases in future years. These 4 'new' farms should have their stock annually vaccinated for the next 3-5 years to prevent further cases. Further information is being sought from Dr. Millar.

A map showing the location of Stanhope can be found  
at:<<http://www.fallingrain.com/world/AS/7/Stanhope.html>>. - Mod.MHJ]

ANTHRAX, HUMAN, BOVINE - AUSTRALIA (VICTORIA) (02)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Monday, February 05, 2007 9:01 PM

From: Hugh Millar <[Hugh.Millar@dpi.vic.gov.au](mailto:Hugh.Millar@dpi.vic.gov.au)>

This is a brief update about a highly localised and contained anthrax incident in northern Victoria near Stanhope.

Anthrax has been confirmed on 3 dairy farms and one beef farm in a very localised area. The disease appeared on the index farm on Fri 19 Jan 2007 and the Victorian Department of Primary Industries (DPI) responded promptly by tracing movements of livestock and products from the property, by destroying the affected carcasses and implementing vaccination on the affected farm and neighbouring properties.

Subsequently, on Fri 2 Feb 2007, anthrax was confirmed on 3 other properties in very close vicinity, but not neighbouring the index property. DPI responded by quickly establishing a Local Disease Control Centre, which is operating out of the DPI office in Tatura.

On each of the 4 farms on which the disease has been confirmed, routine control measures have been implemented including quarantine, incineration of carcasses, and vaccination of cattle. These measures are usually quickly effective in controlling the disease. Livestock and product movements from all the affected farms have been traced to enable containment of all potential contamination.

Because infection has occurred on a small number of farms in a highly localised area DPI has decided to implement a strategic vaccination program. This proactive vaccination program is nearing completion according to an agreed strategy that takes in a 2-neighbour-deep ring and at least 1 km around each/all case farms. This forms a vaccination zone that takes in approximately 60 properties, most of which have already been vaccinated. Vaccination is being carried out rapidly by local private practitioners on contract to DPI and who have been working long hours over the last 4 days.

No new cases have been detected on any farm since Sat 3 February 2007. The situation continues to be well contained.

Anthrax has never been previously reported on any of the 4 farms identified in this incident, although the farms are in an area where anthrax has historically occurred.

DPI routinely manages anthrax incidents, which are usually sporadic, in accordance with well-established guidelines detailed in the Australian Veterinary Emergency Plan (AUSVETPLAN), <[http://www.animalhealthaustralia.com.au/programs/ealp/ausvetplan\\_home.cfm](http://www.animalhealthaustralia.com.au/programs/ealp/ausvetplan_home.cfm)>, and consistent with international standards of the OIE and the World Health Organization (WHO) Guidelines for the Surveillance and Control of Anthrax in Humans and Animals. Procedures include vaccination of livestock on the property, and any introductions, for a period of 3 years, disposal of carcasses by incineration, and vaccination of neighbouring flocks -- if indicated -- on the basis of risk assessment. In our experience very few (ca. 1 in 20) experience further cases of anthrax in the 7 years following completion of the vaccination program.

Farmers in north central Victoria know, and are encouraged on an on-going basis, to be vigilant to report any sudden cases of unexplained cattle death to their private veterinarian or Department of Primary Industries.

Dr. Hugh Millar  
Chief Veterinary Officer  
Victoria, Australia <Hugh.Millar@dpi.vic.gov.au>

[We thank Henry for his report and look forward to updates. - Mod.MHJ]

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[2]

Date: Tue 6 Feb 2007 11:21:44 -0600

From: ProMED-mail <promed@promedmail.org>

Source: AAP.News.com.au [edited]

<<http://www.news.com.au/story/0,23599,21180299-1243,00.html>>

Knackery workers treated for anthrax

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The co-workers of a Victorian knackery worker infected with anthrax while handling affected cattle carcasses have been given antibiotics as a precautionary measure, authorities have said.

Several workers at the Stanhope facility who were considered at risk had been provided with medications by their own doctors, Department of Human Services (DHS) spokesman Bram Alexander said. "The knackery worker has been up and about today and is recovering well," Mr. Alexander said. "He is expected to leave hospital in a few days and he has been keen to let people know that he is okay." The 34-year-old was diagnosed with a skin infection early last week, the 1st such case in the state for 10 years, but has responded well to antibiotic treatment at Goulburn Valley Health Hospital.

At least 25 head of cattle on 4 farms around Stanhope, in Victoria's north, have died as a direct result of the disease, prompting fears among neighbouring farmers of a widespread epidemic.

Today [Tue 6 Feb 2007], Victoria's Department of Primary Industries (DPI) said there was no cause for alarm as anthrax was a common occurrence in Australia and had been for 150 years. However, as many as 5000 head of cattle would be vaccinated by the end of the week, a DPI spokeswoman said. "The vaccination program is targeting all farms and cattle within an 8-km radius of the outbreak in Stanhope," she said.

"It's important to understand that this a routine precautionary measure. There is no public health risk, only an occupational risk for those who work in the industry. Anthrax is not contagious as far as concerns over humans contracting it from live cattle go."

ProMED-mail<promed@promedmail.org>

[That some 2 dozen animals died in this outbreak and presumably the majority on the 19th January farm -- mortality stopped within 24 hours on the other subsequent 3 farms -- reinforces the advice we have given frequently that when incubating cases are suspected, vaccination will do nothing to stop them. First treat the exposed animals with a long acting antibiotic to stop incubating infections. Then wait 7-10 days before vaccinating.

The cause of this outbreak awaits the results of local investigations. The value of "no prior history of disease" on a farm is the length of a piece of string. Sometimes it is true, though, but single sporadic bovine deaths frequently get less attention than they deserve and therefore an ongoing anthrax problem can be invisible to the livestock owner. But if true, alternative causes need to be examined. A constant feature of the recent (2005 and 2006) epidemics in Saskatchewan, Manitoba, and North and South Dakota, is that if the primary outbreak(s) are not handled quickly; effectively there are soon many affected animals on site and the potential for spread by hemophagic flies becomes real. In all 4 states significant numbers of infected animals on the 1st farms affected clearly contributed to the resulting epidemiology of spread. - Mod.MHJ]

#### ANTHRAX, HUMAN, BOVINE - ZIMBABWE (MASHONALAND EAST)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Tue, 6 Feb 2007 04:01:28 -0800 (PST)

From: Brent Barrett <[salbrent@sbcglobal.net](mailto:salbrent@sbcglobal.net)>

Source: The Herald (Harare)/AllAfrica.com

<<http://allafrica.com/stories/200702060152.html>>

Zimbabwe: Anthrax Outbreak Hits Wedza

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Three villages in Wedza district have been quarantined following an outbreak of anthrax last month [?January 2007]. The matter came to the fore after 6 people from the villages fell ill from disease after consuming meat from slaughtered infected beasts. The persons developed lesions similar to those seen on infected cattle but were all successfully treated. [Sic]

No cattle movement is being allowed in and out of the 3 villages, Goneso, Ruzane and Ushe. Slaughter of livestock in the villages has also been put on hold until the stipulated 30-day vaccination period expires. The animals were vaccinated on [13 Jan 2007].

Wedza district veterinary animal health inspector Mr Eliah Mutsiwegota said 10 cattle died around the festive season leading the district to vaccinate a total of 7159 beasts. Mr Mutsiwegota said the district lost another 25 cattle due to tick-borne diseases such as redwater fever and gall sickness.

ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[There seems to be a confusion in the description of the human cases. Successful treatment would suggest that these 3 persons developed cutaneous anthrax and not gastrointestinal anthrax. Cattle can develop cutaneous anthrax but it is less common than the systemic form arising from the ingestion of contaminated soil or bloody soils. Either way, the local clinic is to be congratulated on the rapid recognition and treatment of these patients.

To find Wedza, go to: <<http://www.fallingrain.com/world/ZI/0/Wedza.html>> - Mod.MHJ]

ANTHRAX, HUMAN, BOVINE - AUSTRALIA (VICTORIA) (03)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 7 Feb 2007 05:37:54 -0800 (PST)

From: Brent Barrett <[salbrent@sbcglobal.net](mailto:salbrent@sbcglobal.net)>

Source: ABC News Online [edited]

<<http://www.abc.net.au/news/newsitems/200702/s1842190.htm>>

Anthrax has been found on a farm at Tatura, east of the outbreak area at Stanhope in Victoria's Goulburn Valley. The Department of Primary Industries has confirmed 4 more cattle have died from the bacterial disease. It brings the total number of cattle, which have died from anthrax to 29 since it was first detected 2 weeks ago. Since the outbreak 5 properties have been affected, 4 of them in Stanhope.

Chief vet Hugh Millar says the farm at Tatura has been quarantined and neighbouring property owners have been alerted. "These further cases, clearly disappointing but not unexpected, but certainly don't mean the routine containment and control procedures aren't effective," he said.

More than 10 000 cattle are being vaccinated against the disease.

ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[If there had not been the cases near Stanhope, I very much suspect that these recent Tatura cases might have been missed. Increased awareness equals questions on deaths instead of just calling the local knacker to come pick up the carcasses. Tatura is due east of Stanhope and only a few miles away. (Check them out on Google.earth <<http://earth.google.com/>>) There have been anthrax outbreaks in Tatura in the past so this could well be just a usual background sporadic anthrax outbreak, possibly compounded by the owner not reacting quickly when the 1st cow died -- we saw these "normals" during the epidemic in Saskatchewan last summer [2006]. Let us hope so. If it reflects fly spread from the Stanhope index farm, there may be others waiting to declare themselves. Either way, farmers in the Goulburn valley need to be on the alert. I presume that the Tatura "neighbouring property owners" have been told by Hugh in no uncertain Oz-fashion to get their stock vaccinated PDQ (pretty darn quick). - Mod.MHJ]

ANTHRAX, HUMAN, CAPRINE - PERU (ANCASH)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 10 Feb 2007

From: Brent Barrett <[salbrent@sbcglobal.net](mailto:salbrent@sbcglobal.net)>

Source: Chinaview.cn [edited]

<[http://news.xinuanet.com/english/2007-02/10/content\\_5722138.htm](http://news.xinuanet.com/english/2007-02/10/content_5722138.htm)>

## Peru confirms 2 cases of anthrax

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Peru's National Agricultural Health Service on Friday [9 Feb 2007] confirmed that 2 people were affected with skin anthrax in Huarmey, a town in the Ancash province, 300 km northeast of the Peruvian capital. Service official Jose Cabrera said that the patients, one adult and one child, were infected by live goats suffering anthrax, rejecting reports that they had eaten contaminated mutton.

Cabrera said that the patients had received medical care, while the Service has begun to look for sick goats in order to slaughter them, and planned to vaccinate healthy goats in the area.

Brent Barrett

Indianapolis, Indiana

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[Infected by live goats? Virtually all human cutaneous cases follow from exposure to sick animals after they have been slaughtered and butchered. It occurs through the bacteremic animal blood getting into cuts in the skin of the human handlers, e.g., from handling contaminated meat, when the lesions are most commonly on the hands and forearms. Goats are browsers, though they can graze if they want to. Browse gets contaminated by blow flies landing on nearby bushes after feeding on a carcass where they vomit up their meal before eating it again; fly vomiting in some way aids digestion. In this way, the leaves get contaminated with spores. So a probable scenario is that there was an affected but dead animal about 4-7 days earlier, probably a cow, which the adult and the child helped butcher. Simultaneously, with their developing skin lesions some days later and getting help, cases had begun to appear in goats. The latter were referred to when questioned, leaving out the embarrassing fact that they had participated in the butchering of an anthrax case and the sale of its meat.

To find Huarmey, go to: <<http://www.fallingrain.com/world/PE/2/Huarmey.html>>. - Mod.MHJ]

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[2]

Date: 11 Feb 2007

From: Joe Dudley <dudleyjp@saic.com>

Mauina and colleagues (2005) published a review of the epidemiology of cutaneous anthrax in Peru (see PubMed summary below). A copy of the complete paper is available at <<http://www.scielo.br/pdf/rimtsp/v47n1/23118.pdf>>.

Rev Inst Med Trop Sao Paulo. 2005 Jan-Feb;47(1):25-30. Cutaneous anthrax in Lima, Peru: retrospective analysis of 71 cases, including 4 with a meningoencephalic complication. Maguina C, Flores Del Pozo J, Terashima A, Gotuzzo E, Guerra H, Vidal JE, Legua P, Solari L. Instituto de Medicina Tropical Alexander von Humboldt, Universidad Peruana Cayetano Heredia, Lima, Peru <cirom@upch.edu.pe>.

Anthrax is a zoonosis produced by *Bacillus anthracis*, and as an human infection, is endemic in several areas in the world, including Peru. More than 95 percent of the

reported naturally acquired infections are cutaneous, and approximately 5 percent of them can progress to meningoencephalitis. In this study, we review the clinical and epidemiological characteristics of the patients with diagnosis of cutaneous anthrax evaluated between 1969 and 2002 at the Hospital Nacional Cayetano Heredia (HNCH) and the Instituto de Medicina Tropical Alexander von Humboldt in Lima, Peru.

71 patients were included [49/71 (69 percent) of them men], with a mean age of 37 years. The diagnoses were classified as definitive (44 percent) or probable (56 percent). The most common occupation of the patients was agriculture (39 percent). The source of infection was found in 63 (88.7 percent) patients. All the patients had ulcerative lesions with a central necrosis. Most of the patients (65 percent) had several lesions, mainly located in the upper limbs (80 percent). Four patients (5.6 percent) developed meningoencephalitis, and 3 of them eventually died. In conclusion, considering its clinical and epidemiological characteristics, cutaneous anthrax must be included in the differential diagnosis of skin ulcers. A patient with clinical suspicion of the disease should receive effective treatment soon in order to avoid neurological complications, which carry a high fatality rate.

Joseph P. Dudley, Ph.D. <dudleyjp@saic.com>

[This paper is mainly concerned with human cases in the Province of Lima. "The origin of the infection was found in 66/71 (93.0 percent) of the cases: 34 (47.9 percent) described direct contact with meat and viscera during the sacrifice of a suspect animal, and in 26 (36.6 percent) patients there was an antecedent of direct contact with meat. The disease was associated with a direct animal contact: beef cattle (56/71, 78.9 percent), goats (10/71, 14.1 percent) and swine (5/71, 7.0 percent)." But as ever from exposures resulting from butchering infected animals, as we must presume for the 2 human cases in Ancash, meningoencephalitis is not uncommon in human cases, and every clinician should be on the lookout for it.

Though presently absent from OIE reports, this disease has been reported annually in Peruvian cattle up to 2004; reports on other species are absent in spite of medical reports like the one above. The disease has long been a problem, mainly in the coastal provinces such as Callao, Lambayeque, Moquegua, Tumbes, La Libertad, Ancash, Lima, Ica, and Cajamarca, Huanuco, Cerro de Pasco. - Mod.MHJ]

ANTHRAX, HUMAN, BOVINE - AUSTRALIA (VICTORIA) (04)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 14 Feb 2007

From: A-Lan Banks <[A-Lan.Banks@thomson.com](mailto:A-Lan.Banks@thomson.com)>

Source: ABC Online - Australia [edited]

<<http://www.abc.net.au/news/newsitems/200702/s1847747.htm>>

The Department of Primary Industries has confirmed 5 more cases of anthrax cattle deaths in the Goulburn Valley in northeast Victoria this week, bringing the total anthrax death toll to 34.

The cattle losses are on farms already affected by the disease during the past 3-and-a-half weeks. So far, 8 properties in Stanhope and one at Tatura have had stock losses to anthrax.

A mass-vaccination program including 32 000 cattle is continuing.

ProMED-mail <promed@promedmail.org>

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[2]

Date: 14 Feb 2007

From: <Hugh.Millar@dpi.vic.gov.au>

The situation has gone quiet following our vaccination program, with no new [farms affected in] the past week. In that week, there have been 4 cases on farms that have already had a case and have been vaccinated. This was not unexpected. By the way, we have not deployed mass-use of antibiotics, as these are milking dairy herds, and that would require all milk on those farms to be discarded for a considerable period at massive cost (some of these are large herds).

We are quietly confident that the situation is well contained. This confidence is added to by our surveillance program, whereby all dead stock collected from farms in the wider area are tested at a temporary laboratory we have set up at the knackery. The lab continues to find no positives among that group. We will operate the lab for the duration of the summer, augmenting farmer/vet notification of unexpected/sudden deaths, when we test on farms using smears and our rapid immunochromatographic assay (hand held kit).

Dr. Hugh Millar

Deputy Director Biosecurity Victoria / Chief Veterinary Officer Department of Primary Industries 475 - 485 Mickleham Rd, Attwood VIC 3049 Australia

Hugh.Millar@dpi.vic.gov.au

[Five vs. 4 cases? Probably journalistic inexactitude. When I was a lad in England, the routine was to have the farmer check every cow's temperature at morning and evening milking, i.e. put a hand on her, and if she felt warm, check her, and all fevered cows would be given Penicillin-Streptomycin. This would stop some if not all of those vaccinated but incubating cows from dying. One ongoing question is whether a cow undergoing routine antimastitic treatment with intra-mammary antibiotics has enough circulating antibiotics to kill the vaccine but not to stop an incubating infection. I have long suspected that might be the case. - Mod.MHJ]

ANTHRAX, BOVINE - CANADA (SASKATCHEWAN)

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[1]

Date: Fri 16 February 2007

From: Joseph Dudley <jdudley@eaicorp.com>

Source: Saskatoonhomepage.ca [edited]

<[http://www.saskatoonhomepage.ca/index.php?option=com\\_ezine&task=read&page=9&category=22&article=3796&Itemid=87](http://www.saskatoonhomepage.ca/index.php?option=com_ezine&task=read&page=9&category=22&article=3796&Itemid=87)>

[During the week of 4 Feb 2007], 2 cows died of anthrax: one in the Prince Albert area and the other in the Rose Valley-Archerwill District.

Last summer [2006], about 800 head of livestock died in northeast and north-central Saskatchewan. It was the province's worst recorded anthrax outbreak in history. Those deaths occurred after anthrax spores in the soil were ingested during grazing.

The new cases occurred when the 2 cattle ate feed containing spores.

Dr. Sandra Stephens is a veterinarian with the Canadian Food Inspection Agency. (CFIA). She says the spores could have gotten into the feed in a number of ways. Mud could have stuck to the bales in the field, the soil could have been incorporated in the feed during baling, or standing water could have transferred the spores from the infected soil. Anthrax spores can remain in the soil for years and more cases are expected this summer. Winter anthrax cases are unusual, but Stephens says there was a single case in 2004.

Both herds were vaccinated for anthrax last summer [2006]. However, Dr. Stephens says some cows may not produce enough antibodies. It is also possible that the vaccination for the affected animals may have been missed or not properly given. The vaccine manufacturer says their product is effective for a period of 6-12 months.

Dr. Stephens says producers should watch their animals and report any sudden deaths.

Joseph P. Dudley, Ph.D.

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[It is not unusual for hay to get contaminated especially if it rains during haymaking and the contaminated soil gets up into the drying hay. About 10 years ago there was a similar winter outbreak in Oklahoma [USA] and the disease broke out in the herd buying the hay, which frankly was rather grubby. Why these cows were not protected if vaccinated in 2006 is hard to say but cold weather will reduce the innate resistance of an animal and the ability to mobilise immunity. Although winter cases can occur in grazing animals -- there was a recent case involving a North Dakota [USA] horse -- feed should come under immediate suspicion when investigating winter cases of anthrax.

Further details have been requested of Dr. Stephens. - Mod.MHJ]

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[2]

Date: Mon Feb 19 2007 12:08 PM

From: Sandra Stephens <sstephens@inspection.gc.ca>

The hay is not from a common source, i.e. not the same field of hay. However, this entire area of the province was extremely wet -- so many hay fields had similar flooded conditions. The farm south of Prince Albert (RM 461) was a positive premises from last summer [2006]. The farm south and east of Melfort (RM 397) did not report any cases last summer. Both herds had been vaccinated once last summer.

One herd had some new additions to the herd -- vaccination status unknown. One herd owner acknowledged that a few animals were known to have been missed during vaccination. The owner thought the animal that died had been vaccinated.

Both these herds have been vaccinated again.

Sandra Stephens Canadian Food Inspection Agency

ANTHRAX, HUMAN, BOVINE - AUSTRALIA (VICTORIA) (06)

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Date: Mon Feb 26, 2007 7:27 PM

From: Joseph Dudley <jdudley@eaicorp.com>

Source: Country News [edited]

<<http://www.countrynews.com.au/story.asp?TakeNo=200702267776393>>

The number of cattle killed by anthrax has climbed to 37 on 10 properties following a further case at a Wyuna farm on the weekend.

DPI [Department of Primary Industries and Fisheries] has vaccinated about 29 000 head of cattle in the Stanhope, Tatura, and Wyuna districts, and senior DPI vet George Miller [sic] said there were about 4000 more to go. "Those remaining are the last few we have not yet been able to get to because property owners have not been available or for some other reason," Dr Miller said.

Joseph P Dudley, PhD EAI Corporation 4301 North Fairfax Drive, Suite 200 Arlington, VA 22203 USA <jdudley@eaicorp.com>

[It is not clear but this suggests that there has been a 2nd outbreak in Wyuna. A previous report on 20 Feb 2007 referred to 35 animals,

<<http://www.abc.net.au/news/items/200702/1852209.htm?goulburnmurray>>, and added little, but included a statement by George Miller/Hugh Millar, which was revealing; "But we think the fact that it's a drought and they're eating more soil than usual and this year [2007] we're getting these thunderstorms and perhaps days of high humidity and light rain falls may be aiding and abetting it, we don't know for sure."

This is something we have seen elsewhere -- brief showers preceding anthrax outbreaks in otherwise very hot and dry summers. What I think happens is that the shower initiates a sudden grass spurt when the grazing has been taken right down to be very short and next to the soil. Besides suddenly providing some grazing, the rain softens the ground and

will collect where there are shallow depressions and thus, provide longer grazing and soil consumption by grazing animals, cattle especially. Such depressions have a tradition of attracting anthrax cases and thus, spores. We have found in our Texas studies that these depressions collect calcium, have high pHs and have more organic humus than surrounding areas ... all of which favour spore survival. - Mod.MHJ]

#### ANTHRAX, BOVINE - UKRAINE (IVANO-FRANKOVSK)

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Date: Thu, 8 March 2007

From: ProMED-mail <promed@promedmail.org>

Source: News Agency "Regnum" [translated by Ass. Mod. NP, edited]  
<<http://www.regnum.ru/news/793235.html>>

Anthrax has been found in a Ukrainian meat-packing plant

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The Ministry of Emergency Situations of Ukraine reports that anthrax [sic] has been found in a meat-packing plant in the Ivano-Frankovsk region of Ukraine. According to the information given, on [7 Mar 2007], the Ivano-Frankovsk Regional State Laboratory of Veterinary Medicine identified the anthrax organism during the investigation of a cow's carcass. On [6 Mar 2007] a local inhabitant from the village of Starunja in the Bogorodchanskiy district [located in the Ivano-Frankovsk Region - Mod.NP] had sold this carcass to the slaughter floor of the enterprise [known as] "Ol'va ", Seven persons had had contact with the infected carcass. They are presently under medical supervision and are also receiving preventive treatment. The Ministry of Emergency Situations of Ukraine reports that experts of the Regional Epidemiological Sanitary Station and the Public Service of Veterinary Medicine are carrying out anti-epidemic and anti-epizootic measures in the [geographical area where the infected cow came from].

ProMED-mail <promed@promedmail.org>

[In territory of Ukraine, as well as Russia, Kazakhstan, Kyrghyzstan, Armenia, etc. republics of the former Soviet Union, cases of anthrax in agricultural animals are registered practically annually. It is connected to anthrax spores washing away on pastures, from numerous, old dilapidated and neglected cattle burial grounds. For centuries, animals that died from anthrax were placed in these burial grounds without preliminarily burning the carcasses prior to burial. It was only in the 2nd half of the last century when they began to burn carcasses of animals that died from anthrax.

The Ivano-Frankovsk region (Pre-Carpathian region) is located in the foothills of the Ukrainian Carpathians, in the western part of Ukraine. The Ivano-Frankivsk region borders upon the Lviv, Ternopil, Chernivtsi and Transcarpathian regions and Romania. The region's area is 13.9 ths. sq. kms.. As of 1 Jun 2005 the region had 1 391 036 inhabitants, including 590 688 people living in towns and 800 348 habitants in rural areas. - Mod. NP]

[It is hard to work out what is meant by "carrying out anti-epidemic and anti-epizootic measures in the focus of infection" and whether this is occurring just on the slaughter

floor at the " Ol'va " plant and/or if they are tracing back and investigating the situation in the village of Starunja. From the wording in the article, it would seem that this worthy villager may have delivered a dead cow (carcass) to the plant which was only questioned when they started to butcher it. If true, that raises a number of questions. If he brought in a sick cow, one must question why the plant veterinary inspectors let it be slaughtered. Either way, a mess. Still this is a change from the usual pattern of contaminated meat being sold in street markets, exposing dozens of people, and then discovering it long after the event. In some respects this may be an improvement. Also, this is very early in the year for anthrax cases which are usually seen in the hot summer months. Winter cases are usually a result of contaminated hay or feed.- Mod MHJ]

#### ANTHRAX, HUMAN - UK (SCOTLAND)

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Date: 7 Mar 2007

From: Joe Dudley <jdudley@eaicorp.com>

Source: Dailyrecord.co.uk [edited]

<[http://www.dailyrecord.co.uk/news/tm\\_headline=villagers--fury-at-anthrax-clean-up--&method=full&objectid=18715931&siteid=66633-name\\_page.html](http://www.dailyrecord.co.uk/news/tm_headline=villagers--fury-at-anthrax-clean-up--&method=full&objectid=18715931&siteid=66633-name_page.html)>

Villagers' Fury At Anthrax Clean-Up; US firm set to decontaminate hall

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A specialist firm moved in to clean up following an anthrax scare. Health officials closed their community centre last November 2006 following the death of a man from anthrax. NHS Borders hired New York specialists Sabre to investigate, and the firm found traces of anthrax at the hall, where Christopher, of Hawick, Roxburghshire, held drumming classes. Artist Christopher Norris, 50, is thought to have been infected by contaminated hides he used to make drums. The firm sealed the centre with a tarpaulin "membrane" and are set to begin pumping chlorine dioxide gas into the building tomorrow [8 Mar 2007] to decontaminate the premises. But the handling of the case has angered some residents in tiny in Smailholm, near Kelso.

Retired civil servant Chris Burns, 72, who lives next to the hall, said: "Welcome to Stalag Smailholm," in a reference to the ring of steel fences erected around the centre. He added: "It's a load of nonsense; the hall's been used I don't know how many times between when Christopher died in July and they closed it in November, and nobody has had even a sniffle. They've spent hundreds of thousands of pounds bringing this American company over twice, so that's a lot of taxpayers' money. It's microscopic amounts of anthrax we're talking about, and we held 2 ceilidhs [traditional social dances] in that hall, a number of gatherings and even a meeting to discuss the anthrax scare, and no one has been ill."

Another resident, who did not want to be named, added: "It's outrageous. There's more poison in the pesticides I bring home in my weekly groceries than there is in that hall. As far as I understand it, there's no established anthrax link with the death of this man last year [2006]. Now we've got lots of fat little men in dark glasses who have descended upon this village, strutting about like they're the Mafia. NHS Borders get a life."

[Byline: Jude Sheerin]

Joe Dudley  
Chief Scientist - Principal Analyst  
Biosecurity & Agriculture  
EAI Corporation  
<jdudley@eaicorp.com>

[The villagers have a point. If no student drummers were affected or attendees at the hall in subsequent months, empirically the risk must be small or even trivial even if a few spores were there. Back on 17 Nov 2006, a spokesman for NHS Borders said: "As part of the ongoing investigation, samples were taken from a number of properties in the Borders. From the testing of these samples, minute traces of anthrax spores have been detected in Smailholm village hall. As a precautionary measure, the hall will be closed to further use pending a decision on the appropriate decontamination strategy for the property." Bureaucratic decisions in Scotland are no swifter than anywhere else. Prompt action in November 2006 would have been welcomed and also made the village hall available for Christmas & New Year's celebrations and events. They were denied their traditional New Year's celebration involving haggis, whiskey, invocations of Robbie Burns, bagpipes and dancing. Instead, in Lent, they got Sabre (the US company responsible for the disinfection). - Mod MHJ]

ANTHRAX, PORCINE - RUSSIA (ORENBURG)

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Date: Mon 12 Mar 2007  
From: ProMED-mail <promed@promedmail.org>  
Source: News agency "Regnum" [trans. Assoc. Mod.NP, edited]  
<<http://www.regnum.ru>>  
Anthrax reported in the Orenburg region

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A case of anthrax has been reported in a domestic pig in the Orenburg region. A message about a suspected case of anthrax on a private farm in the village of Kuzminovka in the Grachevskiy district in the Orenburg region was received by the Central Administrative Board in the Ministry of Extreme Situations of Russia in the Orenburg area. On the same day, compulsory slaughter of the pig was carried out in connection with clinical symptoms of disease in the animal.

Bacteriological confirmation of anthrax was received on 11 Mar 2007. The complex restrictive-administrative and anti-epizootic measures are in place on the farm. Quarantine has been declared in the Grachevskiy District until 25 Mar 2007, and round-the-clock protection and a sanitary-epidemic processing post were established. 15 veterinary service staff, 4 employees of the Department of Internal Affairs, and 5 units of special technicians are involved in disinfecting the site. The pig farm premise has been burnt [sic]. 39 pigs and 4 sheep have been vaccinated; the animals were isolated, and now they are under supervision by the veterinary service. All those involved on the farm are under medical supervision, according to the press-service of the Ministry of Extreme Situations of Orenburg.

ProMED-mail <promed@promedmail.org>

[Anthrax in the Orenburg region is reported frequently enough. The inhabitants of the village Istemas of Dombarovskiy district of this region felt ill with anthrax in the summer 2006 after processing the carcass of a sheep that died from anthrax. In the same village in 2004, some infected cattle were slaughtered and butchered, and the infected meat was sold in the nearby city of Orsk, resulting in 8 villagers becoming ill as well as 2 market porters in Orsk, with one death.

The Orenburg region is in the foothills of the Southern Ural mountains. It borders Kazakhstan in the south, the Samara region in the west and northwest, and the Republic of Bashkortostan and the Chelyabinsk region in the north. The total area is 124 000 sq. km. The population is 2 150 000 inhabitants (2005 census). The capital city of the region is Orenburg. - Mod.NP]

[Pigs frequently suffer from oropharyngeal anthrax, so once seen, it is easy to diagnose a 2nd time. On the other hand, they are usually infected from either contaminated feed or from being fed parts from an infected carcass, such as viscera. So there may well be a bigger problem than this ministerial news release would indicate. I hope that the burning did not involve the farm but just the carcass.

To find Orenburg go to:

<<http://www.fallingrain.com/icao/UWOO.html>> or <<http://english.orenburg-cci.ru/guests/map/>>. It is in south-central Russia and lies along the Kazakhstan northern border. - Mod.MHJ]

#### SMALLPOX VACCINE, ECZEMA VACCINATUM - USA

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Sat 17 Mar 2007

From: Thomas Roesel <[roesel@lycos.com](mailto:roesel@lycos.com)>

Source: Chicago Tribune online [edited]

<<http://www.chicagotribune.com/news/local/chi-0703170122mar17,1,3952575.story?coll=chi-news-hed&ctrack=1&cset=true>>

#### Smallpox shot infects soldier's toddler son

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In the 1st case of its kind in years, a 2-year-old boy is being treated in Chicago for a rare and life-threatening infection that he contracted from his father, a U.S. Army soldier recently vaccinated against smallpox. The Indiana boy is in critical condition with eczema vaccinatum, an unusual side effect of the smallpox vaccine that can affect [unusually susceptible] people who receive the shot or their close contacts.

Doctors also said the boy appears to have passed the infection to his mother, who has a much milder case of the virus in the smallpox vaccine, which is also called vaccinia virus. The virus is not smallpox, though it is similar enough to offer protection from that deadly disease, which was declared eradicated in 1980.

The mother and child are being treated at the University of Chicago's [U. of C] Comer Children's Hospital, which withheld their names at the family's request. There is no infection risk for the general population, government officials say, since the vaccine virus can spread only through close physical contact.

But the boy's diagnosis last week has prompted a frenzy of activity and daily conference calls involving the federal Centers for Disease Control and Prevention [CDC], the U.S. Department of Defense, and the state and city public health departments. The U.S. Food and Drug Administration [FDA] gave emergency authorization for the hospital to treat the boy with ST-246, an experimental drug for smallpox that is untried as a therapy in humans.

The smallpox vaccine fell out of general use in the 1970s, but the case could be a lesson for the U.S. military, which has vaccinated 1.2 million personnel against smallpox since 2002 amid fears of bioterrorism.

It's unclear why the father was allowed to have contact with his son, who had a history of eczema, shortly after the vaccination. The skin condition is a well-known risk factor for eczema vaccinatum, and official guidelines warn that people with eczema should avoid contact with vaccinees. "We are looking into how this could have happened," said U.S. Army spokesman Paul Boyce.

Officials say the general population could receive smallpox vaccinations in the event of a bioterrorist attack or other unforeseen exposure. For that reason, experts want to study the Indiana family to learn more about treatment and transmission of the vaccinia infection. "There certainly are also conceivable insights into smallpox infection," said Dr. Inger Damon, chief of the CDC's poxvirus and rabies branch. Damon has been involved in the daily conference calls on the boy's treatment. Experts said they knew of no cases of eczema vaccinatum since at least 1990, when the military last had a program of smallpox vaccination. The vaccinia virus in modern smallpox vaccines is closely related to an older form of vaccinia called cowpox, the disease English doctor Edward Jenner used in the late 1700s to develop early methods of vaccination. Jenner relied on the observation that milkmaids who had cowpox seemed to be protected from later smallpox infection. He found that patients inoculated with material from cowpox sores also got protection from smallpox. That history is why the word vaccine stems from the Latin word for cow. Vaccinia was modified from its original form over the years but remains an infectious agent with the potential for side effects.

The father of the Indiana boy received the vaccine in late January 2007 before a planned military deployment. The Army delayed his departure and permitted him to visit his family in mid-February 2007. Two weeks later, a rash broke out on the boy's skin. He

came to the U. of C. on 3 Mar 2007 after being transferred from St. Catherine's Hospital in East Chicago. Doctors 1st identified his widespread rash as a different form of eczema, but it worsened in his 1st few days at the U. of C. His mother developed sores after she and her son arrived at the Chicago hospital. Doctors believe she contracted the disease from the boy because of their lengthy close contact.

A pediatric dermatologist, Dr. Sarah Stein, noticed the boy's lesions had changed to look like round blisters with a dimple in the middle, a potential sign of vaccinia infection. The medical team took scrapings from the lesions, which they analyzed and sent to the Illinois Department of Public Health's Chicago office for further testing. Rapid tests by the state and further tests at the CDC confirmed the boy had the vaccinia virus, officials at those agencies said. The hospital also sent the CDC photos of the boy's lesions.

The hospital already was using infection precautions with the boy, but staffers then added such measures as gloves and face masks. They also placed the boy in a room with negative pressure so the air would always blow inward, keeping the virus inside. The boy's rash had spread to cover 80 percent of his body, said Dr. Madelyn Kahana, chief of pediatric intensive care medicine at the U. of C. He was going into sepsis, a devastating, system-wide infection rarely seen with viral cases. "In the later stages of [eczema vaccinatum], it can look like smallpox," said Damon of the CDC. The boy needed a ventilator to help his breathing because of the powerful pain medication he needed for the lesions.

The boy received the primary treatment for eczema vaccinatum, a drug called vaccinia immune globulin, or VIG. The drug came from a stockpile the CDC keeps in case widespread vaccination ever becomes necessary. He also got an antiviral drug called cidofovir and the experimental drug ST-246, which has been shown to protect laboratory animals from exposure to smallpox. The drug recently entered preliminary human trials but had never been used in a sick patient.

U. of C. officials said the boy has shown signs of improvement since hitting a low point last weekend. His mother's health was never in serious danger, but she has remained in his hospital room to keep others from being exposed. Health officials in Chicago and Indiana have tracked all of the family's contacts and found no additional cases so far. Kahana said the boy probably will lose 20 percent of his outer skin layer, but she hopes he will recover without the need for skin grafts. She believes the case should be a lesson to the military, which must educate service members about the risks of the vaccines it requires them to take. "I think the information simply wasn't disseminated properly or impressed in a manner that was understood," Kahana said, "because I don't think anyone would knowingly expose their child to this."

[Byline: Jeremy Manier]

Thomas Roesel <roesel@lycos.com>

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[2]

Date: 18 Mar 2007

From: ProMED-mail <promed@promedmail.org>

Source: Chicago Sun-Times [edited]

<<http://www.suntimes.com/news/metro/302333,CST-NWS-VACCINE18.article>>

Dad's smallpox shot infects son, 2; Experimental drugs bring Indiana boy back from brink of death

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A 2-year-old boy stricken with a rare infection from the smallpox vaccine is improving but remained in critical condition Saturday [17 Mar 2007] at the Comer Children's Hospital at the University of Chicago [U. of C.]. The boy was infected by his father, a U.S. soldier who was vaccinated in January 2007 in preparation for service in Iraq. But his deployment was delayed, and he returned home to Indiana late last month. His son, who suffers from skin lesions known as eczema, then became infected by vaccinia, a virus similar to smallpox and used in the vaccine against it.

The boy is the 1st person to suffer from the severe infection, known as eczema vaccinatum since the U.S. military began inoculating troops in 2002. But his condition is so uncommon that U. of C. experts said they could not find reports of any cases in the United States since before 1972, when routine vaccinations for smallpox were halted.

"This is something that is new to us," said Kenneth Alexander, head of pediatric infectious disease at U. of C. The boy, whose name was not released, was sent to U. of C. from a northwest Indiana hospital on 3 Mar 2007 after he developed a severe rash. He didn't improve after treatment, and by 7 Mar 2007, a dermatologist noticed his lesions resembled those caused by smallpox, something doctors had only seen in photos because the disease was eradicated.

Doctors contacted the federal Centers for Disease Control and Prevention [CDC], which agreed to fly in a treatment never used on a child, vaccinia immune globulin (VIG). The drug was hand-delivered by U.S. marshals.

The boy's condition continued to worsen, and last weekend, his lungs and kidneys began to fail. "He was near death," said Madelyn Kahana, chief of pediatric critical care medicine. Painful skin lesions covered most of his body.

The CDC then asked the Food and Drug Administration [FDA] to grant emergency permission to try ST-246, an experimental drug being developed to fight smallpox. It had been effective in treating mice and monkeys infected with the virus, said U. of C. pediatrician John Marcinak, who is spearheading the boy's treatment. But it had never been used on a sick person. That, combined with VIG and another drug, seems to be working. Since he 1st got the drug on 11 Mar 2007, "he is slowly improving," Marcinak said.

The boy's mother contracted a milder form of the vaccinia virus from the boy and has been quarantined in the boy's room but is recovering well, officials said.

Doctors said the father -- who has since returned from his deployment at the hospital's urging -- had no idea he should stay away from his son after receiving the vaccine. Kahana said the "military has to be careful" in making sure soldiers understand the risks and that they stay away from high-risk populations, such as people with eczema. "They are trying to figure out where the misstep was," she said of the military. A military spokesman could not be reached Saturday [17 Mar 2007].

The boy has 2 siblings, but no one else appears to have been infected, doctors said. The hospital has taken extreme precautions in treating the boy, including keeping him in a room where the air only flows inward. Officials say the general public is not at risk because the infection is only transmitted through close physical contact.

[Byline: Dave Newbart]

ProMED-mail <promed@promedmail.org>

[Following the intentional release of anthrax spores [in letters] in the USA in October 2001, the USA decided to embark upon vaccination campaigns with the smallpox vaccine. During the period leading up to the vaccination activities, ProMED-mail had significant coverage of the discussions on the risks and benefits of using the smallpox vaccine that was available at that time (and is still the vaccine being used).

In a prior ProMED-mail posting Smallpox vaccine, ACIP recommendations - USA (02) 20020621.4560, this moderator presented a discussion on the risks of vaccination with the currently available vaccine. Kemper et al. did a "back of the envelope" presentation of possible risks associated with smallpox vaccination for the Effective Clinical Practice, March/April 2002 issue of the American College of Physicians (ACP) journal. They concluded:

"After excluding high-risk individuals and their contacts, we estimate that a vaccination strategy directed at people aged one to 29 years would result in approximately 1600 serious adverse events and 190 deaths. Vaccinating people aged one to 65 years would result in approximately 4600 serious adverse events and 285 deaths. Limitations: While advances in health care over the past 3 decades could mitigate vaccine complications, the increased number of un-immunized high-risk individuals (e.g., those with eczema or immune suppression) could increase complication rates."

They then went on to discuss the limitations and additional dangers to "high-risk" individuals of a mass immunization campaign. "We assumed that individuals would be screened before vaccination for risk factors, such as eczema, immunodeficiency, or pregnancy, in themselves or in their close contacts. The prevalence of eczema and the number of immunocompromised individuals have increased over the past 3 decades. High-risk populations would be excluded from vaccination, as would their potential contacts, since recent vaccine recipients are "infectious" and can transmit the virus (vaccinia).

Individuals with eczema are at high risk for developing eczema vaccinatum. The prevalence of eczema is at least 10 percent, or more than 28 million people in the United

States. Immunocompromised persons are at high risk for progressive vaccinia. We know of no overall estimate for the number of immunocompromised individuals in the United States. This number would include recipients of organ transplants (184 000 solid-organ transplants in the 1990s), individuals with diagnosed and undiagnosed HIV infection or AIDS (850 000), and patients with cancer (approximately 8.5 million). We estimate, therefore, that in the entire U.S. population as many as 10 million individuals (3.6 percent) may be at increased risk for developing progressive vaccinia.

Therefore, approximately 15 percent of the population may have increased risk for a direct adverse event after smallpox vaccination. In addition to exclusion of these individuals from vaccination, persons in close contact with them should not be vaccinated to avoid inadvertent transmission and subsequent indirect adverse events. Close contacts would include, at minimum, household members. Insufficient data are available to estimate precisely the number of close contacts who would be excluded from a vaccination campaign. We estimate that another 10 percent of the population would be excluded. On the basis of the foregoing, we further estimate that 25 percent of the population would be excluded from vaccination because of high risk or the possibility of coming in contact with a high-risk individual"

<<http://www.acponline.org/journals/ecp/marapr02/kemper>>.

The incident discussed in this current posting relates to a vaccine recipient exposing a family member with a disease that is a known high risk for complications following vaccination with the smallpox vaccine (eczema in an individual or close contact of an individual is a reason to self exclude from receipt of smallpox vaccine). Self exclusion from events for medical reasons involves a very complicated set of issues for the individual who needs to self exclude. In the above incident, the father theoretically should have self excluded from receipt of the vaccine, or if not, should not have gone to his home to expose his son (and wife) to the vaccine virus. But how easy is/was it for a military recruit about to be deployed to (1) self exclude from the vaccination (and risk losing his deployment possibilities and possible promotions related to the service) and (2) refuse to visit with his family prior to deployment that would theoretically remove him from the possibility of seeing his family for months?

One is also reminded of a generalized vaccinia infection that occurred in Israel during their vaccination campaign in 2002. In the prior ProMED-mail posting Smallpox vaccination strategy - Israel (03) 20021222.6113, we carried the following: "An Israeli surgeon ignored warnings that people should not be vaccinated if someone at home has low immunity. His wife was on medication that lowers immunity. The surgeon infected her with the vaccinia virus, a cousin of smallpox." Again, reasons for non-appropriate self exclusion are very complex.

The occurrence of a secondary contact case in the above household suggests that perhaps the mother of the child may have had a similar predisposing immune disorder, making her at risk of contact for vaccinia infection as well.

As the risk of infection with variola virus is presently a theoretical risk of intentional release of smallpox virus as part of a biological warfare act, the risk of adverse events from the use of the current vaccine remains significantly higher. A question that comes to mind is whether we are any closer to having a safer vaccine for use among those individuals felt to be at high risk of early exposure to intentionally released smallpox virus. - Mod.MPP]

[Report [2] above indicates that the soldier did not self-exclude for selfish reasons, but because he had not heard of any contra-indication to exposing his son. However, the potential problems with self-exclusion discussed above remain valid. - Mod.JW.]

#### ANTHRAX, BOVINE - CANADA (SK): SUSPECTED, REQUEST FOR INFORMATION

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed, 28 Mar 2007 10:55:34 -0700 (PDT) [date report accessed]

From: Brent Barrett <[salbrent@sbcglobal.net](mailto:salbrent@sbcglobal.net)>

Source: Discovery Moosejaw, Canada [edited]

<[http://www.discovermoosejaw.com/index.php?option=com\\_ezine&task=read&page=11&category=3&article=2000&Itemid=237](http://www.discovermoosejaw.com/index.php?option=com_ezine&task=read&page=11&category=3&article=2000&Itemid=237)>

#### Anthrax Reported in the Southwest

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Another farm in the southwest is under quarantine. This time the problem is anthrax.

The southwest reporting its 1st case of anthrax. Dr. Sandra Stephens is the regional veterinarian with the Canadian Food Inspection Agency. "The producer had reported some mortalities to his local veterinarians and they had submitted samples to the Prairie Diagnostic Labs in Saskatoon and so this time we have 3 confirmed animals who have died".

Stephens says the farm in the RM of White Valley is now under quarantine and the remaining animals will be treated with an antibiotic and then vaccinated.

ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[Details have been requested from our Saskatchewan colleagues. Note that this report apparently only confirms deaths, not laboratory confirmation. -Mod MHJ]

#### ANTHRAX, BOVINE - CANADA (SASKATCHEWAN) (02)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 30 Mar 2007

From: Sandra Stephens <[ssstephens@inspection.gc.ca](mailto:ssstephens@inspection.gc.ca)>

We now have 4 premises in Saskatchewan for which the CFIA laboratory in Lethbridge has confirmed anthrax.

Premises 1, 1st mortality on 31 Jan 2007 Premises 2, 1st mortality on 4 Feb 2007  
Premises 3, 1st mortality on 22 Feb 2007 Premises 4, 1st mortality on 15 Mar 2007

The 1st 3 cases occurred in the northeast grain belt in the same area as the summer of 2006 outbreak [see ProMED refs. below]. All 3 herds had been vaccinated the previous summer. Two of the 3 premises had animals die from anthrax the previous summer. All cases are believed to be related to feed contaminated with anthrax spores (very heavy snow cover in this area at the time of the outbreaks). The 3 herds were re-vaccinated.

The 4th premises is located in the southwest corner of Saskatchewan (west and south of the 2 cases of anthrax diagnosed in the south part of the province in 2006). This area of the province was very dry during the summer of 2006. Feed is believed to be the source of the anthrax spores, as the animals are not on pasture. The 1st animal on this premises died on 15 Mar 2007, with subsequent deaths on 16 and 17 Mar 2007. The herd was treated with antibiotics and the "offending" feed removed. Vaccination of the herd was done 8 days following the antibiotic treatment (in accordance with CFIA policy).

Kim Knight-Pickets will be covering the anthrax file for Les Kumor for the next year. There will also be a new Disease Control Specialist in Saskatchewan who will be taking over the anthrax file (hopefully by June 2007, just in time for the summer anthrax season!).

The latest map [can be accessed at the URL below]; the green circles are the 2007 cases; the red triangles are the 2006 cases.

Sandra Stephens

Veterinary Program Specialist,

Animal Health and Production Program Ne2rk, Canadian Food Inspection Agency

247 - 111 Research Drive , Saskatoon, SK. S7N 3R2 Government of Canada

<<http://www.inspection.gc.ca>> <[ssstephens@inspection.gc.ca](mailto:ssstephens@inspection.gc.ca)>

[Please see the following file for the map (requires log in to Vetmed):

<<http://vetmed.lsu.edu/WorldClient.dll?Session=MYZOTBD&View=Attachment&Number=13279&FolderID=0&Part=2&Filename=Anthrax%20SK%20Mar%2023%202007.pdf>>

This report and map are typical of the high quality work we have come to expect with CFIA and the Canadian provincial veterinary authorities. They set the standard for everyone else. - Mod.MHJ]

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[2]

Date: Sat 31 Mar 2007

From: Sylvia MacBean <s.macbean@sasktel.net>

Source: Regina Leader-Post [edited]

<[http://www.canada.com/reginaleaderpost/news/business\\_agriculture/story.html?id=71ae2601-89ee-4819-800f-0b558cdcd7a](http://www.canada.com/reginaleaderpost/news/business_agriculture/story.html?id=71ae2601-89ee-4819-800f-0b558cdcd7a)>

A new case of anthrax has been reported on a farm in southwestern Saskatchewan, a Canadian Food Inspection Agency (CFIA) veterinarian reported Friday [30 Mar 2007].

"We have had a case confirmed on a Shaunavon area farm on 22 Mar 2007. We have had 3 confirmed (livestock) deaths," said Dr. Sandra Stephens, a Saskatoon-based veterinary program specialist with CFIA. "This is our 4th winter case of anthrax. We have had 3 cases in the northeast corner in late February and early March [2007]."

Livestock can come in contact with the anthrax spores by grazing on grass with spores or from hay bales from an outbreak area. Livestock producers and feeders should know where their hay supply comes from, Stephens said.

Last summer [2006], Saskatchewan experienced the largest outbreak of anthrax in the province's history. The 1st case of anthrax was diagnosed at the end of June 2006 north of Melfort, and over the next 2 months, cases were identified in 43 municipalities in northeast and east central Saskatchewan. The total loss reported to CFIA was 806 livestock on 153 farms.

Anthrax is not a new disease in Canada. Stephens says the Saskatchewan veterinary laboratory has reports dating back to 1912, and the disease was reported in almost every decade during the last century. In the past 10 years, there have been 8 outbreaks of anthrax in Western Canada. CFIA is recommending vaccination for livestock that will be grazed in outbreak areas for the next 3 years. Livestock producers should consult their local veterinarians about vaccination for the disease.

Sylvia MacBean <s.macbean@sasktel.net>

#### ANTHRAX, HUMAN, BOVINE - GUINEA-BISSAU (OIO)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Mon 9 Apr 2007

One person died and a further 7 were infected in a recent anthrax outbreak in Guinea-Bissau that was apparently caused by eating bad meat, the health ministry said on Monday [9 Apr 2007].

Between 24 Mar and 6 Apr 2007, 8 cases of the disease were recorded in Bissaora, a town [70 km. (44 miles)] north of the capital Bissau, said the ministry's director general, Placido Cardoso.

"The people affected by the disease had eaten contaminated meat during a traditional mass circumcision ceremony," he said.

Cardoso did not say where the bad meat had come from but said a veterinary team had been sent to the region.

He added that 5 [cases of anthrax infection in cows] had been recorded in Quinhacam village, in the same area, and the local population had been warned against eating meat of uncertain origin.

In 2005, 5 people died during an anthrax epidemic in several villages in the Mansoa region, east of Bissau.

Anthrax is an infectious disease caused by the *Bacillus anthracis* bacteria, found in wild cattle and domestic livestock. It can be caught by humans through exposure to infected animals or their undercooked meat.

ProMED-mail <promed@promedmail.org>

[A review of the ProMED-mail reports of outbreaks involving both humans and cattle indicates the wide geographic distribution. We know that anthrax is a worldwide problem but it useful to remember that zoonotic transmission occurs fairly frequently. The method of transmission between cattle and humans may result in gastrointestinal or cutaneous anthrax depending on the circumstances of the outbreak and its location. In fact, this outbreak serves to remind us of the potential of human gastrointestinal anthrax when cattle die suddenly while appearing to be relatively healthy and therefore are regarded as viable meat. - Mod.PC

#### ANTHRAX, HUMAN, LIVESTOCK - INDONESIA (NUSA TENGGARA TIMOR)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Sat 14 April 2007

From: Brent Barrett <[salbrent@sbcglobal.net](mailto:salbrent@sbcglobal.net)>

Source: Jakarta Post

<<http://www.thejakartapost.com/detailnational.asp?fileid=20070414.G02&irec=1>>

Suspected anthrax outbreak in West Sumba results in 5 people dead.

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The deaths of 5 people in 2 villages in West Sumba region, East Nusa Tenggara [Nusa Tenggara Timur], have led authorities to quarantine both areas due to a suspected outbreak of anthrax. The residents, from Kapaka Madeta and Kawangohari villages, died after consuming beef at the end of last month [March 2007].

Laboratory results from Makassar, South Sulawesi [Sulawesi Selatan], showed meat samples taken from buffaloes, horses and cows positively infected with the *Bacillus anthracis* bacteria, which causes anthrax.

The local administration says the outbreak in the 2 villages is an extraordinary situation and a number of relevant agencies are making efforts to vaccinate and treat thousands of hot-blooded animals, including goats, pigs, sheep and deer.

Head of the Animal Health Division at the East Nusa Tenggara [Nusa Tenggara Timor] Husbandry Office, Maria Geong, said in Kupang on Friday [13 Apr 2007] that anthrax was a fatal disease.

"Anyone infected by the virus has little chance of surviving," she said. "Spores which protect the bacteria probably surfaced due to floods or the dry weather. Anthrax spores can live up to 60 years underground," she said.

According to data at the provincial husbandry office, anthrax started appearing on Sumba, Flores, Timor and Rote islands between 1906 and 1957, attacking hot-blooded livestock. It reoccurred in Aesesa district, Ngada regency in 1954, causing the deaths of hundreds of horses, goats and sheep.

The last outbreak occurred in 1987 on Sabu Island, Kupang regency, resulting in one human death as well as the death of dozens of animals. During that outbreak, hundreds of people also suffered from malignant, blister-like swellings of pus.

"Data shows that 40 people in East Nusa Tenggara [Nusa Tenggara Timor] have died of anthrax so far," Maria said. Clinically, anthrax attacks only hot-blooded animals. Human infection occurs by direct physical contact with an infected animal. The disease can also be transmitted to humans by inhaling air containing the anthrax spore or (eating meat from infected carcasses)," said Maria.

Animals suffering from the disease will have blood coming from their mouth, nose, ears and anus. They will have a high body temperature and difficulty breathing.  
ProMED-mail <promed@promedmail.org>

[Many thanks to Joe Dudley and A-Ian Banks for submitting the same or similar articles. The general location of the outbreaks can be seen at:  
<<http://www.answers.com/topic/east-nusa-tenggara>>. The islands are part of a volcanic arc, the Lesser Sunda Islands, extending from Bali to Timor.

The case fatality rate for gastrointestinal anthrax is high according to World Health Organization (WHO) Guidelines for the Surveillance and Control of Anthrax in Humans and Animals, which can be seen here:  
<[http://www.who.int/csr/resources/publications/anthrax/WHO EMC\\_ZDI\\_98\\_6/en/](http://www.who.int/csr/resources/publications/anthrax/WHO EMC_ZDI_98_6/en/)>.

Mod.MHJ who usually handles these posting but is "off duty" presently is a contributor to the document. It indicates that 95 percent or more of the cases globally are cutaneous in nature. Overt gastrointestinal and pulmonary cases of anthrax are more often fatal as treatment is often not administered in a timely fashion. Serological evidence does

indicate recovery in some individuals. Gastrointestinal anthrax is of two forms, intestinal and oropharyngeal. The latter can be fatal in half the cases, even with treatment.

I can only guess the term "hot blooded animals" in the article means warm blooded mammals, of which herbivores are most susceptible. It is true that spores are extremely long lived in soil and that outbreaks often occurred after either rain and/or drought. The WHO surveillance guidelines indicate further research is needed to clarify the interaction of rain, temperature and drought in producing outbreaks of anthrax.

Finally, it appears that outbreaks such as this are relatively common in Indonesia. Interested readers can find a discussion about surveillance and control in a previous posting referenced below - see Anthrax, human, livestock - Indonesia (West Java) 20051118.3360 - Mod.PC] - Mod.MPP]

ANTHRAX, HUMAN, LIVESTOCK - INDONESIA (NUSA TENGGARA TIMOR)  
(02)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Tue 17 Apr 2007

From: Joseph Dudley [fnjpd@uaf.edu](mailto:fnjpd@uaf.edu)

Source: The Jakarta Post, Kupang [edited]

<<http://www.thejakartapost.com/detailnational.asp?fileid=20070417.G06&irec=5>>

Anthrax outbreak forces isolation of 2 villages

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Health officials are monitoring approximately 90 families in 2 villages in the West Sumba regency, East Nusa Tenggara, for signs of anthrax after 5 members of the villages died of the infectious disease, an official said Monday. The deaths forced authorities to seal off the villages on Saturday and begin mass vaccinations of livestock in the area, veterinary official Maria Geong said.

"At least 90 families in the 2 isolated villages may have been contaminated by the anthrax bacteria," Geong said, as quoted by AFP. The families had eaten the meat of cows and water buffaloes believed to have been infected, she said. Geong did not say how many people in total the emergency action affected.

About 2000 people live in the 2 villages, which will be sealed off for a month to stop the spread of the disease. Apart from killing 5 residents, the disease has resulted in 12 others undergoing intensive treatment after showing symptoms, Geong said. Geong said a 60-person team was in the process of vaccinating 50 000 cows, buffaloes, goats and pigs in the area.

Dead and infected animals have already been burnt but any remnants of their flesh and bones were now being collected to prevent the further spread of the disease, AFP reported.

Some 40 people have died from the disease in the East Nusa Tenggara province since 1994, Geong said. (Yemris Fointuna)  
Joseph P. Dudley, Ph.D  
Research Associate,  
Institute of Arctic Biology - University of Alaska Fairbanks Department of Earth Science  
- University of Alaska Museum

[Anthrax is sporadic through much of Indonesia now having once been under good control, affecting cattle, small ruminants, buffalo, and occasionally horses and pigs. It is seen on West Sumatra, Jambi, DKI Jakarta, West Java, Central Java, West Nusa Tenggara, East Nusa Tenggara, South Sulawesi, Southeast Sulawesi, & Central Sulawesi. And because the veterinary response is reactive, not proactive, we now routinely see such numbers of human cases. -Mod.MHJ]

#### ANTHRAX, HUMAN, BOVINE - AUSTRALIA (VICTORIA) (07)

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A ProMED-mail post <<http://www.promedmail.org>>  
Date: Sun 22 Apr 2007 9:41 PM  
From: Hugh Millar <[Hugh.Millar@dpi.vic.gov.au](mailto:Hugh.Millar@dpi.vic.gov.au)>  
Anthrax in the Goulburn Valley, Victoria, Australia

#### Summary

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Anthrax incidents in the Goulburn Valley in January/February 2007 have been contained. Over a period of 6 weeks, 37 cattle died of anthrax on 10 farms. No cases have occurred since 23 Feb 2007.

#### Introduction

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Although details are sketchy, anthrax in the Goulburn Valley area of northern Victoria is thought to have had its beginnings in the 1880s when anthrax-contaminated imported bone meal was used as fertiliser on local pastures. Previous to 1997, anthrax had not been reported from this part of the state since 1914.

A large and unusual large outbreak occurred in the summer/autumn of 1997, which affected over 80 properties. Sporadic outbreaks on single properties have been reported occasionally since then.

#### The 2007 outbreak

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A small outbreak occurred in January-February 2007, which affected 37 cattle on 10 properties at 3 distinct foci. One focus, involving multiple properties, was at Stanhope, and the other 2, each involving single properties only, were at nearby Tatura and Wyuna. These appear to be unrelated to the Stanhope focus.

Acute deaths in dairy cattle were reported starting from 19 Jan 2007, on a property near Stanhope in Victoria's Goulburn Valley irrigation area. Upon the diagnosis of anthrax, the Victoria Department of Primary Industries (DPI) immediately instituted quarantine measures, incineration of carcasses, and vaccination including on neighbouring properties. Death sites were disinfected with formalin to reduce spore contamination.

Further deaths began occurring at the end of January [2007] on nearby properties, leading to a corresponding enlargement of the vaccinated area. A policy was adopted of vaccinating cattle on neighbouring properties in a ring 2-deep around infected properties, and on all properties within 1 km. (0.62 miles) of infected properties. A total of 8 properties were affected in this focus, with 31 cattle dying. The last confirmed case at this focus occurred on 12 Feb 2007.

Irrigation-related earthworks may have unearthed buried spores, which precipitated the outbreak at Stanhope, and spores may have spread through the movement of insects, foxes, and scavenger birds. None of the 8 farms involved have ever reported anthrax prior to this year [2007].

At Tatura, a case of anthrax was diagnosed on a single property on 6 Feb 2007, with quarantine, incineration, and ring vaccination being instituted as described above. Three cattle died on this property, with the last death being reported on 12 Feb 2007. This farm had a history of anthrax in the 1997 outbreak, and yearly vaccination was carried out between 1997 and 2000 (as is carried out on all farms in Victoria where anthrax is detected).

The 1st case at Wyuna was diagnosed on 18 Feb 2007; 3 died in total with the last death on 23 Feb 2007. Again, a ring vaccination policy was instituted. This farm had never reported anthrax prior to this year [2007].

In addition to the vaccinations cited above, given that climatic conditions were clearly favourable for anthrax, the Department also decided to vaccinate cattle and sheep on all properties known to have been infected in outbreaks since 1997.

Knackery [renderer] surveillance was quickly implemented, which involved the screening of all livestock presenting at the local knackery with sudden death or suggestive history of anthrax. In face of this intense surveillance, no cases have been recorded since 23 Feb 2007. The temporary lab operated until the end of March 2007. No stock positive to anthrax were detected at the knackery during that period, though cases were detected on farms through farmer notifications, indicating that the level of reporting to DPI by farmers and veterinarians was excellent.

A total of 34 604 cattle on 218 properties have been vaccinated in the 2007 incidents. Given that sufficient time has elapsed for an effective level of immunity to develop in animals on infected and at-risk properties, the situation has returned to normal. The possibility of further sporadic cases cannot, however, be ruled out altogether.

Comment

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Both the farming community and government veterinary staff in the Goulburn Valley have become used to sporadic outbreaks in what has now become known as the "anthrax season," hence the rapid and comprehensive response to the outbreak.

The ability to rapidly trace cattle movements related to infected properties was greatly enhanced by the use of NLIS (the National Livestock Identification System). The system uses electronic cattle identification and movement recording to trace cattle movements through a national database.

A system of ante-mortem and post-mortem inspections at abattoirs ensures that anthrax does not enter the human food chain. In this particular outbreak, use of NLIS was able to rapidly show where animals had moved to from infected properties in the weeks prior to the outbreak.

The controls routinely instituted by DPI when anthrax is detected ensure that animals are not presented for sale or slaughter from affected or vaccinated herds for the appropriate periods.

In late January 2007, one knacker worker contracted the cutaneous form of anthrax, highlighting the need for knackeries to be vigilant in their application of biosecurity measures. The high level of awareness by knacker workers of the risks of anthrax ensured that timely medical attention was sought and the skin infection was treated without complications.

Human intestinal and pneumonic anthrax are unknown in Australia.

Hugh Millar

Chief Veterinary Officer

Department of Primary Industries

475 - 485 Mickleham Rd, Attwood VIC 3049 Australia <Hugh.Millar@dpi.vic.gov.au>

[The efficiency and collaboration shown by Hugh, the Victoria veterinary service, the farming community, and the local knackeries and abattoirs is to be most highly commended and to be a model to the rest of us. - Mod.MHJ]

ANTHRAX, BOVINE - USA (SOUTH DAKOTA)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Thu 26 Apr 2007

Source: Keloland Television [edited]

<<http://www.keloland.com/News/NewsDetail6371.cfm?Id=0,56560>>

Anthrax has been detected in a South Dakota cattle herd.

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State Veterinarian Sam Holland says the disease has been confirmed in a herd of about 50 cattle in Brown County. The same herd had an outbreak 2 years ago.

Doctor Holland says anthrax spores survive indefinitely in contaminated soil, and much of South Dakota has the potential for an outbreak. Drought, floods and high winds can expose anthrax spores to grazing livestock. The disease can kill animals rapidly, and contact with the carcasses can spread anthrax to humans.

Holland says that's why it's important to quickly quarantine infected herds and properly dispose of carcasses by burning or burying them.

Communicated by:

ProMED-mail Rapporteur Brent Barrett

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[2]

Date: 25 Apr 2007

Source: Marshall County Journal [edited]

<[http://www.zwire.com/site/news.cfm?BRD=1971&dept\\_id=175429&newsid=18258301&PAG=461&rfti=9](http://www.zwire.com/site/news.cfm?BRD=1971&dept_id=175429&newsid=18258301&PAG=461&rfti=9)>

Anthrax Flares Up In Northeast SD

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An anthrax case was diagnosed in a cow herd in northeast South Dakota on Tuesday [24 Apr 2007]. The case is in a herd that experienced anthrax losses in 2005, and the producer has lost 2 out of a group of 50 this spring.

"With the wet conditions up there, I am assuming that pasture flooding may have contributed to the exposure," said Russ Daly, SDSU extension veterinarian. "Vaccine use is unclear, but my guess is that either this part of the herd did not get vaccinated last spring [2006], or the vaccine given last spring did not last long enough to protect at this time of year."

Spores of anthrax live in the soil, and wet conditions can cause a flare up of the disease. The only real protection for cattle is vaccination.

"My blanket recommendation, and also that of state veterinarian Sam Holland, is that all producers in South Dakota should strongly consider anthrax vaccination before turnout, whether they are in areas that have experienced losses before or not," said Daly. "As we saw in 2005, it is just too hard to predict where cases will appear. Most of the producers in problem areas have gotten on this wagon after 2005, but this serves as a reminder that they need to continue this practice."

Marshall County extension educator Tyler Melroe said the flare up is something that producers need to take seriously. "It's kind of a big problem because a flare up from the herd affected in 2005 shows that conditions are right for it to flare up again," said Melroe. "There's not any way to stop the disease after it's ingested. Anthrax is almost always fatal,

and death occurs pretty quickly. The best means of protecting yourself is being proactive and trying to prevent it with vaccination."

Communicated by:

ProMED-mail Rapporteur Brent Barrett

[I cannot overemphasize the importance of Sam Holland and Russ Daly's advice to their ranchers to get their stock vaccinated this spring (2007), now. If it has been wet, they can certainly expect a bad fly summer, and therefore any outbreak has the capacity to load up flies with spores, and away it will go. A consistent pattern in the Dakotas and the Canadian prairies is that when the initial outbreak(s) are slow to be diagnosed and the number of affected animals is more than just 2 or 3, there are then patently enough dirty-mouthed flies to infect the neighbors and the neighbor's neighbors. The Sterne vaccine is very efficient, but the protection is only for 9-12 months. Last year's shots won't help you. And we can safely assume that however much Sam and Russ say, "Get vaccinated!," there will be some simpletons who won't vaccinate their stock and then be surprised while they watch their animals die. But if every rancher did as he was told, we would be out of a job.

The NE corner of South Dakota was part of the later stages of the North Dakota 2005 epidemic that year as it spread south. So, it would be wise of those ranchers in SE North Dakota to heed Sam and Russ's advice. - Mod.MHJ]

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[3]

Date: 26 Apr 2007

From: Sam Holland <dr.holland@state.sd.us>

NEWS RELEASE

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Anthrax has again appeared in South Dakota livestock. Dr. Sam Holland, State Veterinarian, reports the disease has struck a cattle herd in Brown County. Specimens were collected Mon 23 Apr 2007 and taken to the state veterinary diagnostic lab, which confirmed the diagnosis on Wed 25 Apr 2007. Dr. Holland reports the case involves a pasture containing a group of approximately (50) head of cattle. This herd experienced anthrax in 2005, and while the majority of the herd has been vaccinated in a timely manner, the one death occurred in a small group of (8) replacement heifers that had not yet received vaccine. The herd was scheduled to be immediately treated with antibiotics, vaccinated and carcasses properly disposed of under the supervision of the Animal Industry Board. Anthrax is a very serious, quarantinable disease because it can cause the rapid loss of a large number of animals in a very short time. Often times, animals are found dead with no illness detected. Anthrax is also communicable to humans as well as other animals through carcasses so that strict enforcement of quarantine and proper burning and burying of carcasses suspected to have died from anthrax is important. Anthrax is not usually spread from animal to animal, and quarantines are imposed to prevent further soil contamination by movement of affected livestock. Producers are alerted to outbreaks so they can consult their veterinarians and vaccinate their livestock if deemed appropriate.

Dr. Holland reports that anthrax spores survive in contaminated soil indefinitely and that much of South Dakota has the potential of experiencing an outbreak. Significant climate changes such as drought, floods, and winds can expose anthrax spores to grazing livestock.

Sam D. Holland, DVM, State Veterinarian  
<dr.holland@state.sd.us>

[Sam commented that the single [note: single] dead cow was within feet, as in a couple of meters, of a burial spot from the 2005 epidemic. Many thanks, Sam. - Mod.MHJ]

#### ANTHRAX, HUMAN, WILDLIFE - KYRGYZSTAN (NORTH)

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Date: 3 May 2007

From: Asankadyr Junushov <junushov@mail.ru>

I'd like to provide information from the Republican Center for Quarantine & Especially Hazardous Diseases on a human case of anthrax case in Kyrgyzstan.

The case is a 40-year-old man living in the "1st May" village in the Sokuluk rayon, Chui oblast (North Kyrgyzstan). On 12 Apr 2007, he went fishing in Kazakhstan on the Chu river in the Phurmanovka area. On the way back home, he came across a saiga [antelope, presumably dead]. The man butchered the saiga. The meat seemed to be bad, and he poured oil (petroleum) over it and set fire to it. On 26 Apr 2007, he received a diagnosis of cutaneous anthrax.

Asankadyr Junushov

Director

Biotechnology Institute of National Academy of Sciences of Kyrzystan Bishtek,  
Kyrgyzstan <junushov@mail.ru>

[While one might quibble gently about an uncertain long incubation period, the history is patently clear. This area of Kyrgyzstan is commonly afflicted with anthrax in the livestock. Our thanks to Asankadyr for this report.

To find Sokuluk, go to:

<<http://www.fallingrain.com/world/KG/0/Sokuluk.html>>.

- Mod.MHJ]

#### SMALLPOX VACCINE, VULVAR LESIONS - USA (ALASKA)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Thu 3 May 2007

Source: MMWR Weekly, 56(17);417-419 [edited]

<[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5617a1.htm?s\\_cid=mm5617a1\\_e?](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5617a1.htm?s_cid=mm5617a1_e?)>

Vulvar Vaccinia Infection After Sexual Contact with a Military Smallpox Vaccinee --  
Alaska, 2006

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On 10 Oct 2006, an otherwise healthy woman visited a public health clinic in Alaska after vaginal tears that she had 1st experienced 10 days before became increasingly painful. The patient reported having a new male sex partner during the period 22 Sep to 1

Oct 2006. A viral swab specimen from a labial lesion of the woman was submitted to the Alaska State Virology Laboratory (ASVL) for viral culture. The viral isolate could not be identified initially and subsequently was sent to CDC on 9 Jan 2007, where the isolate was identified as a vaccine-strain vaccinia virus. After vaccinia was identified, investigators interviewed the woman more closely and learned that her new sex partner was a male U.S. military service member stationed at a local military base. Further investigation determined that the service member had been vaccinated for smallpox 3 days before beginning his relationship with the woman. This report describes the clinical evaluation of the woman and laboratory testing performed to identify the isolate. Health-care providers should be aware of the possibility of vaccinia infection in persons with clinically compatible genital lesions who have had recent contact with smallpox vaccinees.

#### Clinical Description

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At the public health clinic on 10 Oct 2006, the woman told health-care providers that her partner consistently wore condoms during sex; however, a condom broke during vaginal intercourse on 1 Oct 2006. The 2 had no further contact after 1 Oct 2006. The patient told health-care providers she did not recall seeing penile ulcers or other unusual skin lesions on her partner. She had no history of genital ulcers or sexually transmitted infections and said that her vaginal tears did not result from sexual violence or abuse. She reported testing negative for human immunodeficiency virus approximately 3 months earlier. She had no fever, itching, or dysuria.

Clinical examination revealed 2 shallow ulcerations, one measuring 5 mm on the upper left labia minora and the other measuring 3 mm on the lower right labia minora, mild bilateral labial erythema and induration, and vaginal discharge. No inguinal lymphadenopathy was noted, and examination findings were normal for the cervix, uterus, adnexa, and anus. Tests for gonorrhea and *Chlamydia trachomatis* infection were negative; serologic tests for syphilis and hepatitis B virus were not performed. A viral swab specimen from the left labial lesion was submitted to ASVL for culture for possible herpes virus infection. A primary diagnosis of sexually transmitted infection was made but was not further characterized, and no specific treatment was administered pending viral culture results. A secondary diagnosis of vulvovaginal candidiasis was made, and the patient was treated with an over-the-counter medication.

After 2 days of increased redness, swelling, and burning of the labia minora, the woman returned to the clinic on 12 Oct 2006. The evaluating health-care provider diagnosed cellulitis, discontinued the over-the-counter preparation, and prescribed a 7-day course of oral cephalexin (500 mg by mouth, twice a day). No specimens were collected during the 2nd clinic visit. The patient's labial redness, induration, and pain resolved, and the ulcers healed completely by 10 Oct 2006.

#### Laboratory Findings

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At ASVL, viral cytopathic effect was observed in viral culture cells from the specimen collected from the woman on 10 Oct 2006; however, immunofluorescent antibody staining was negative for herpes simplex virus (HSV). During late October to November 2006, the viral isolate was successfully passaged into 2 additional viral culture cell lines, but subsequent staining of the viral isolate also was negative for HSV and

cytomegalovirus. The viral isolate was submitted on 22 Nov 2006 to a 2nd reference laboratory, where it remained unidentified one month later.

On 9 Jan 2007, ASVL sent the unidentified viral isolate to CDC, where the isolate was evaluated using 2 pathogen-discovery strategies: a pan-herpes virus polymerase chain reaction (PCR) test and a deoxyribonuclease sequence-independent, single-primer amplification (DNase-SISPA) sequencing method,\* in which a specimen is treated with DNase, followed by nucleic acid extraction, random amplification, restriction enzyme digestion, and SISPA of the restriction fragments. Although the pan-herpes virus PCR assay was negative, the DNase-SISPA method produced unique and prominent DNA fragments in the unknown isolate but not in the control cells. The PCR product containing these fragments was cloned and sequenced. Eight of 9 sequenced clones of the bands matched vaccinia virus sequences. Additional PCR testing by the CDC Poxvirus Laboratory identified the isolate as being consistent with a vaccine-strain vaccinia virus. On 30 Jan 2007, CDC notified ASVL of the results, which were immediately relayed to the Alaska Section of Epidemiology.

Epidemiologic Investigation

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After receiving notification of the laboratory result, Alaska state health officials interviewed the patient and learned that she lived alone and had never been vaccinated against smallpox. However, the patient told investigators that her recent sex partner was a U.S. service member stationed at a local military base and that he had been her only sex partner during the period from one month before her infection until the time her ulcers were completely healed (1 Sep to 19 Oct 2006). The patient also told investigators that her sexual contact with her recent partner had included manual stimulation in addition to vaginal intercourse. The patient did not remember seeing bandages on her partner and did not know whether he had received any recent vaccinations.

The service member was deployed overseas in late October 2006 and was not available for interview. According to the preventive medicine officer at the military base where the service member was stationed, the service member had reported no underlying skin disorders or other contraindications to vaccination. He had received smallpox vaccination on 19 Sep 2006, after 1st receiving instruction on care of the vaccination site and proper hand hygiene. Investigators identified no additional transmission of the virus from the vaccinee and no transmission from the woman to other persons, including health-care providers who had examined her.

[Reported by: J McLaughlin, MD, Alaska Section of Epidemiology; T Schmidt, MS, M Westcott, Alaska State Virology Laboratory. J Baumbach, MD, New Mexico Dept of Health. JP Lofgren, MD, Alabama Dept of Public Health. S Gerber, MD, Chicago Dept of Public Health. R Panares, MD, Hammond City Health Dept; W Staggs, MS, Indiana State Dept of Health. L Collins, MD, Walter Reed National Vaccine Healthcare Center, Silver Spring, Maryland. S Tong, PhD, Y Li, MS, W Tan, PhD, E Mar, PhD, S Ruone, MS, A LaMonte-Fowlkes, MPH, L Anderson, MD, Div of Viral Diseases, National Center for Immunization and Respiratory Diseases; M Reynolds, PhD, Y Li, PhD, G Trindade, PhD, V Olson, PhD, I Damon, MD, PhD, Div of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne and Enteric Diseases; R Fagan, MD, E Lederman, MD, EIS officers, CDC]

MMWR Editorial Note

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This case of vulvar vaccinia was transmitted by a sex partner who had recently received smallpox vaccination. Unintentional transfer of vaccinia virus can occur from a vaccination site to a 2nd site on the vaccinee (inadvertent autoinoculation) or to a close contact (contact transmission)

(<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5501a1.htm>>1).

The most frequently reported sites of vaccinia infections caused by unintentional transfer are the face, nose, mouth, lips, genitalia, anus, and eye

(<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5501a1.htm>>1). To prevent transfers, health-care providers should educate vaccinees regarding proper hand washing after bandage changes or other contact with the vaccination site

(<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5204a1.htm>>2). This general recommendation remains the most effective way to prevent genital vaccinia infections.

Persons with any new genital lesion, including lesions suspected to have been caused by vaccinia infection, should avoid sexual contact and consult a health-care provider.

Vulvar vaccinia infections often are characterized by painful labial ulcers and/or vesicles, vulvar edema and pruritus, vaginal discharge, and occasionally by vaginitis and tender bilateral inguinal lymphadenopathy (3--9). Most reports of vulvar vaccinia were

published before cessation of widespread smallpox vaccination programs (7); however, in addition to the case described in this report, laboratory-confirmed cases of vulvar vaccinia after sexual contact with vaccinated military personnel have been reported in New York and Texas since the U.S. military resumed smallpox vaccination in 2002 (8,9).

Similar to the case described in this report, herpes virus infection was initially suspected in the New York case, and information regarding contact with a recent smallpox vaccinee was not disclosed until after laboratory evidence of vaccinia virus had been detected.

Laboratory confirmation of orthopoxvirus infections, including vaccinia, requires test methods that are not commercially available. However, tests for orthopoxvirus infections are available at many state and local health departments via the Laboratory Response Network, and confirmatory (i.e., species-specific) testing is available at CDC. In the case described in this report, initial testing of clinical specimens for presumed herpes virus infection at ASVL was inconclusive. In the absence of critical information (i.e. patient contact with a recent smallpox vaccinee) to guide testing of the isolate, ASVL forwarded the specimen to CDC. Identification of vaccinia as the etiologic agent illustrates the power of using multiple new tools for identifying pathogens in patients with a disease of unknown etiology.

Since 8 Mar 2007, CDC and the U.S. Department of Defense have received reports of 4 instances of nongenital contact vaccinia associated with recently vaccinated service members, including 2 cases from Indiana and one case each from Alabama and New Mexico. Health-care providers and public health professionals should ask about any contact with recent smallpox vaccinees when evaluating patients with vesicular lesions compatible with vaccinia. Early identification of such contact can guide diagnostic tests, allow for timely contact tracing and clinical intervention, and facilitate prompt patient counseling to prevent further transmission of the virus.

Acknowledgments

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The findings in this report are based, in part, on contributions by the examining health-care provider and the preventive medicine officer at the military base.

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- \* Reyes GR, Kim JP. Sequence-independent, single-primer amplification (SISPA) of complex DNA populations. Mol Cell Probes 1991;5:473--81.

Communicated by:

ProMED-mail Rapporteur Brent Barrett

[This report highlights 3 important messages: (1) Health-care providers should be aware of the possibility of vaccinia infection in persons with clinically compatible genital lesions who have had recent contact with smallpox vaccinees; (2) recently vaccinated servicemen should be instructed in appropriate hygiene procedures after administration of smallpox vaccine, and (3) new and powerful techniques have become available for identifying pathogens in patients with a disease of unknown etiology, such as the sequence-independent, single-primer amplification (SISPA) of complex DNA populations described by Reyes and Kim in Mol Cell Probes 1991;5:473--81. - Mod.CP]

#### ANTHRAX, HUMAN - RUSSIA (STAVROPOL)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Tue 15 May 2007

Source: IA, Regnum [in Russian, translated by Corr.ATS, edited]

<<http://www.regnum.ru/news/827450.html>>

An outbreak of anthrax has been reported in the Kursk region of Stavropol oblast. The administration of Rospotrebnadzor (Territorial Directorate of the Federal Services for Consumer Protection and Human Welfare) for Stavropol informed IA Regnum that a

resident of the village of Avalovo died on 12 May 2007. The case was reported on 10 May 2007, after the owner of a [sick] bull calf slaughtered it in [his yard.] Currently, anti-epidemic, organizational, and anti epizootic measures are being taken in the village, Rospotrebnadzor reports. The main prophylactic measures are the immunization of animals and compliance with veterinarian-sanitary rules for preparation, storage, transportation, and processing of materials [of animal origin.] Note: the territory of Stavropol is not favorable for anthrax. [sic] Cases of anthrax among animals and humans are being registered periodically in the constantly bad areas. communicated by: ProMED-mail <promed@promedmail.org>

[Anthrax has long been a problem in the livestock of this oblast, though presently the incidence is a mere fraction of what it once was. In addition, the Russian authorities seem only to report cases that involve humans, and it may be that livestock cases without human involvement are underobserved and underreported. How this bull calf became infected is unclear. Suckling animals rarely get anthrax and are not vigorous grazers. On the other hand, it might have been a yearling animal, not strictly a "calf". - Mod.MHJ] \*\*\*\*\*

[2]

Date: Tue 15 May 2007

Source: IA, Newsru.com [in Russian, trans. Corr.ATS, edited]

<<http://www.newsru.com/russia/15may2007/sib.html>>

[A resident] of the Kursk region of Stavropol oblast died in the Mozdok regional hospital of North Ossetia. He was admitted to hospital last week with [probable] signs of anthrax. The Ministry of Urgent Situations of Russia in the Southern Federal District informed the "Interfax" agency that the 48 year old man slaughtered [and butchered] a bull calf in [his yard] and sold the meat in the market. There are reasons to believe that the bull had had anthrax.

Those who could have bought and consumed the infected meat are being traced. It has been clarified that the meat had been sold in the territory of Kabardino-Balkaria but the buyers have not been identified yet. Specialists from the anti-plague station took specimens from the yard and from the carcass, and the results will be available by Wednesday.

The administration of Rospotrebnadzor stated that the cause of infection could have been a contaminated soil nidus. The man slaughtered the bull being forced to do it [Sense not clear. -Mod.MHJ]. It is known that the animal was vaccinated. The person could have [become infected] while butchering the carcass.

communicated by: ProMED-mail <promed@promedmail.org>

[The fact that the animal was vaccinated does not mean that 100 per cent protection was achieved. The protective antibodies could fail to be produced for some reason. The man could have acquired the infection either from the animal or from the soil. The rapid course of the disease and the absence of information about local signs indicate that the disease took a generalized (septic) course. At the end of last year (2006), 2 other fatal cases were registered in the neighboring area of Ossetia-Alania. (see reference below). - Mod.NP

Human infections from soil are, frankly, exceptionally rare. The only reliable case that this writer knows of was when some men were illegally salvaging some steel buried in an abandoned car factory site in Georgia, which had also been used as a cattle grave for

anthrax infected cows. The Russian/Soviet literature quotes cases, but the authorities there investigate human cases vigorously and if there is any evidence of the illegal slaughtering and butchering of (sick) animals, court cases and fines follow. Thus, reports exist of agricultural workers getting cutaneous anthrax after hoeing cabbages and no animals had died.

How this man was "forced" to slaughter this animal is hard to understand. The usual situation is that when faced with a moribund animal, the owner will kill and butcher it hoping to get something for the meat when sold to his neighbors or in a local market. Competent veterinary authorities actively discourage such activities, even if the animal is going just for domestic consumption. However, the continuing incidence of Russian human cases indicates a veterinary shortcoming there in the rural areas.

We are hearing more and more these days of ineffective livestock vaccines. On the other hand, if this animal had been vaccinated while still with maternal immunity, the latter would have affected the ability of the live vaccine to multiply and stimulate antibodies. Time will tell. If the local vaccine is poor, there will be reports this coming summer of vaccinated cattle succumbing to the disease. - Mod.MHJ

#### ANTHRAX, HUMAN, LIVESTOCK - ARGENTINA: 2006

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Fri 18 May 2007

From: Ramon Nosedá <[rnosedá@laboratorioazul.com.ar](mailto:rnosedá@laboratorioazul.com.ar)> [edited]

Anthrax outbreaks, Argentina, in 2006

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In 2006 there were 29 anthrax outbreaks affecting cattle with a total of 9 human cutaneous anthrax cases, with 3 in the province of Buenos Aires in the partidos of Azul & Rauch.

Provincia de Buenos Aires (from 1977 to 2006 there were 41 partidos (counties) affected in this province): Azul (3), Benito Juárez (1), Coronel Pringles (1), Coronel Tejedor (1), Daireaux (1), General Alvear (2), General Lamadrid (1), Lobos (1), Puan (2), Rauch (2), Suipacha (1), Tandil (1) Provincia de Córdoba: Roque Saenz Peña (1), Rosales (1)

Provincia de La Pampa: Cohelo (3), Huacal (2), Santa Rosa (1), Tornquist (4)

Since 1997 the annual incidence has been steadily decreasing. Inter-agency discussions are in hand to have coincident anti-FMD [foot and mouth disease] and Sterne vaccination of all cattle in Buenos Aires Province.

communicated by Ramon Nosedá <[rnosedá@laboratorioazul.com.ar](mailto:rnosedá@laboratorioazul.com.ar)>

[This was extracted from Dr Nosedá's annual report for this disease. It includes data from Laboratorio Azul Diagnostico, INTA - Balcarce (Dr Ernesto Odriozola), Laboratorio Santa Rosa-La Pampa (Dr Fernando Esain), and Laboratorio Bahía Blanca-Bs.As (Dr Luis Alvarez). We are grateful for Ramon and his colleagues sharing it with us, and for the progress Argentina is having in controlling this disease. - Mod.MHJ]

#### ANTHRAX, HUMAN, BOVINE - INDIA (KERALA): REQUEST FOR INFORMATION

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Mon 21 May 2007 16:59:18 -0700 (PDT)

Source: NewKerala.Com [edited]

<<http://www.newkerala.com/news5.php?action=fullnews&id=31697>>

Man with suspected anthrax admitted to hospital

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A person suspected to be suffering from anthrax was admitted to the Medical College Hospital here today [21 May 2007]. Kannan of Peruvambu in Palakkad District was admitted to the Palakkad District Hospital 3 days ago with fever and "malignant pustule" on his hand. It was reported the patient had helped bury cattle which died of anthrax few days ago making him contract the disease, hospital sources said.

As the hospital authorities could not confirm whether the patient was infected with anthrax, they referred the case to the Thrissur Medical College Hospital for further investigations. Medical college hospital sources said the blood samples had been sent for detailed tests and the results could be available only day after tomorrow [23 May 2007]. Only then could it be confirmed if the case was anthrax or not, the sources added.

Meanwhile, Kerala Health Minister P K Sreemathy, at a function in Pathanamthitta, disclosed that a case of human anthrax had been reported from Palakkad.

Communicated by: ProMED-mail Rapporteur Brent Barrett

[As a ministerial statement is not necessarily the same as scientific confirmation, it would be appreciated if any of our Indian members, medical and veterinary, can confirm that the cattle and the man had been afflicted with anthrax. As any prior treatment with antibiotics before a human sample is taken can result in the latter having no viable organisms, the human presumptive diagnosis may depend on the veterinary laboratory confirmation on the cattle deaths. - Mod.MHJ]

ANTHRAX, HUMAN - RUSSIA (STAVROPOL) (02)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Tue 22 May 2007 12:18:27 -0700 (PDT)

Source: Russian News & Information Agency NOVOSTI [edited]

<<http://en.rian.ru/russia/20070522/65920385.html>>

Police in southern Russia hunt anthrax-infected meat

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Local police and agriculture inspectors in southern Russia are searching for itinerant gypsies [Roma] who may have contracted anthrax when they bought contaminated meat from a local farm, authorities said Tuesday [22 May 2007].

Investigators, who followed medical workers cleaning the farm of Apatovo in Stavropol Territory of an anthrax case that killed a local resident 12 May [2007], learned that the man who had killed an infected ox 6 days earlier sold part of its meat to gypsies [Roma]. "Any anthrax case is an emergency," Alexei Alexeienko of Rosselkhoznadzor, the inspectorate overseeing compliance with standards and official requirements in the agricultural sector, said. Outbreaks of anthrax, a potentially fatal disease affecting

animals and humans periodically occur on the rural steppes, part of which includes the Stavropol Territory neighboring Chechnya.

Communicated by: ProMED-mail Rapporteur Brent Barrett

[The original report had the affected animal being a vaccinated calf. That it is now an 'ox', age unstated but presumably adult, is much more likely. Gypsies (Roma) are a significant presence in Eastern Europe and Russia, and are perceived to move around independently of the majority population. As they are suspicious of others, sometimes with cause, it will take very experienced and skilled investigators to track down the group that bought this meat. - Mod.MHJ]

#### ANTHRAX, HUMAN, LIVESTOCK - INDIA (ORISSA)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 3 Jun 2007

Source: Times of India [edited]

<[http://timesofindia.indiatimes.com/India/Anthrax\\_kills\\_six\\_in\\_Orissas\\_Koraput\\_district/articleshow/2095262.cms](http://timesofindia.indiatimes.com/India/Anthrax_kills_six_in_Orissas_Koraput_district/articleshow/2095262.cms)>

Anthrax has killed 6 people and affected 32 in a tribal-dominated Orissa district in the past fortnight, say officials. All the deaths took place in Koraput district. The victims contracted the disease after eating rotten buffalo meat, officials said.

Two people from the Paraja and Sirimunda village, some 500 km from here, died of the disease on 20-21 May 2007, while 4 more succumbed later, chief district medical officer K. Haribandhu Reddy said. He said other people infected with the disease were now out of danger, as a team of doctors was camping in these 2 villages.

Anthrax usually affects cattle but passes on to humans if they eat contaminated meat. The disease, if not diagnosed early, can be fatal.

Communicated by:

ProMED-mail Rapporteurs Joseph P. Dudley and Dan Silver

[An earlier report issued on 1 Jun 2007 had 2 dying from eating "cattle meat." It is not unlikely, in the confusion of the situation, that the species of the index animal case has been obscured by later livestock deaths. See: <<http://newspostindia.com/report-1928>>.

One must presume that the team of doctors was doing more than just camping near the affected villages. - Mod.MHJ]

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[2]

Date: Sun 3 Jun 2007

Source: Newindpress.com [edited]

<<http://www.newindpress.com/NewsItems.asp?ID=IEQ20070602221904&Page=Q&Title=ORISSA&Topic=0>>

Six persons have reportedly died, and 50 have been affected by anthrax in the past one week [sic.: See above for 1st deaths on 20-21 May 2007. This problem is now well into its 2nd week, if not 3rd. - Mod.MHJ] in Semiliguda and Laxmipur blocks of Koraput district. According to reports, a week back, 2 tribals died, and 10 were affected in Subai village in Semiliguda block. On Wednesday [30 May 2007], 4 persons died, and 20 were

affected in Parja village under the same block. The condition of 10 persons is stated to be critical.

Similarly, 30 persons have been affected in the neighboring villages of Jhalaguda, Raudipadar and Daliamb under Laxmipur block. Sources said those affected took ill after consuming raw meat.

Every year, at least 10 persons die of anthrax in these 2 blocks due to consumption of raw meat.

Koraput Chief District Medical Officer H K Reddy reported that medical teams are camping in the villages and measures are being taken to prevent further spread of the disease.

Communicated by:

ProMED-mail Rapporteur Joseph P. Dudley

[Notably absent from both these reports is any comment on the presence of a veterinary team to vaccinate local livestock and oversee the proper disposal of any (remaining) carcasses. If, as this report describes, some 10 human deaths from anthrax occur in these 2 blocks each year, it would be logical and cost effective to implement a proactive annual livestock vaccination program as well as active surveillance for unexpected animal deaths in these and the adjoining blocks. This should be demanded by the Koraput Public Health office. As I have said before and will keep repeating, if there are any human cases of anthrax, with or without deaths, it is because of faults by the responsible veterinary service and nobody else. The medics can only do their best to tidy up the human problem. Anthrax is primarily a livestock disease, and human cases will not occur if the disease is properly controlled in animals. In a September 2003 ProMED report (20030914.2328) of anthrax in Orissa, it was stated that "The district health department has reported more than 80 cases of anthrax since January 2003." Action would appear to be long overdue in this region. - Mod.MHJ]

ANTHRAX, BOVINE - CANADA (SK) (03)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Tue 12 Jun 2007

Source: The StarPhoenix [edited]

<<http://www.canada.com/saskatoonstarphoenix/news/business/story.html?id=a3d0121c-4b9a-48ce-a138-f79c078de43e>>

Anthrax-related cattle death confirmed near Lloydminster

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Following the province's 1st anthrax-related cattle death of 2007 [sic, see comment below: - Mod.MHJ], a federal government veterinarian says environmental factors favour another outbreak like the one that killed more than 800 cows in Saskatchewan last year [2006]. Sandra Stephens, a veterinarian with the Canadian Food Inspection Agency (CFIA), confirmed on Monday [11 Jun 2007] that one cow died of anthrax on a farm near Lloydminster in late May. Although

4 additional deaths on the farm have since been ruled as unrelated to anthrax, approximately 750 cows have been part of a standard 21-day quarantine since that time.

In 2006, 804 cows died as a result of the bacteria, which grows rapidly under wet conditions. Most of those deaths occurred in east-central and northeastern Saskatchewan. The most recent death is west-central Saskatchewan's first since 2004, Stephens said. In that case, the cow likely contracted anthrax after eating canola growing in the bed of what was once a slough near Neilburg, which is approximately 70 km [43.5 miles] south of Lloydminster. Given the wet spring throughout the province, Stephens said there's a high possibility of another outbreak like last year. "It (the probability) would be very good," she said. "We're seeing pretty much the same environmental conditions."

While authorities wouldn't release the name or precise location of the farm where the fatality occurred, attending veterinarian Dr. Carmen Durovick said it was fewer than 3.2 km [2 miles] from the Alberta border in the RM of Wilton, just south of Lloydminster. Durovick, who diagnosed the dead animal as having anthrax, described the bacteria as "very hearty."

Given the significance of last year's outbreak, Stephens recommends vaccination for all cattle on the farm currently under quarantine and for all cattle in northeastern Saskatchewan. "Every cattle producer up there should be vaccinating their animals; bison, cattle or whatever," Stephens said. At about USD 2 per vaccination, Durovick said she doesn't see why cattle producers wouldn't protect their herd. "It's not an expensive vaccine," she said. "If people are at all worried, it's a pretty inexpensive insurance policy."

[Byline: Graham Andrews <gandrews@sp.canwest.com>]

Communicated by: ProMED-mail Rapporteur Joseph P. Dudley

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[2]

[The Canadian papers kept saying that this was the "1st" provincial outbreak this year in spite of the 4 in February and March 2007. I queried Sandra. She kindly replied as follows: - MOD.MHJ]

Date: Wed 13 Jun 2007 10:20 AM

From: Sandra Stephens <sstephens@inspection.gc.ca>

I believe the problem is the media. The May case in the Lloydminster area was the 1st case seen in cattle on pasture. It was clearly indicated to the reporter that we had 4 premises with confirmed anthrax deaths in February and March of this year; but they chose to write what they did!

Sandra Stephens

DVM/Disease Control Specialist

Animal Health & Production Program Network Canadian Food Inspection Agency

Saskatoon, SK, Canada <sstephens@inspection.gc.ca>

[Sandra kindly provided a map of the 2006 and 2007 outbreaks in SK and this May outbreak is way to the west of all the 2006 cases. Lloydminster is a town actually on the AB/SK border on Highway 16 between Edmonton and Saskatoon. Neilburg is 70 kms [43.5 miles] SSW of Lloydminster and close to Manitou Lake, so patently it is a boggy area. It is worth checking out on MapQuest for a look at the aerial image.

- Mod.MHJ]

ANTHRAX, BOVINE - UKRAINE (02) (KHARKOV)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Sat 7 Jul 2007

Source: Itar-Tass [edited]

<<http://www.itar-tass.com/eng/level2.html?NewsID=11698733&PageNum=0>>

Anthrax case registered in Kharkov region of Ukraine

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A case of animal anthrax has been reported in the Novotroitskoye settlement of the Kharkov region of Ukraine. The regional veterinary medicine department stated that it was diagnosed during an examination of a carcass of a cow that died on Wednesday [4 Jul 2007]. The cow's carcass was disposed on Friday [6 Jul 2007], the veterinary service reported.

It has been established that 4 people had contacts with the cow. At present, specialists of veterinary medicine as well as the veterinary police are taking epidemiological and anti-epizootic measures. The Ukrainian state veterinary department has the situation under control.

Communicated by:

ProMED-mail rapporteur Brent Barrett

ANTHRAX, BOVINE - USA (MINNESOTA)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Sat 7 Jul 2007

Source: Associated Press [edited]

<<http://www.crookstontimes.com/articles/2007/07/07/news/6news6.txt>>

Bull in Marshall County dies from anthrax

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A bull in Marshall County, Minnesota, has died from anthrax, marking the 1st case of the disease in 2007, authorities confirmed. The state Board of Animal Health said Thursday [5 Jul 2007] that the bull was found dead on pasture last week. Tests confirmed that the bull had anthrax.

The herd had not been vaccinated for anthrax this year [2007]. The herd has since been taken off the pasture where the infection occurred and has been placed under quarantine for 30 days from the day the bull died.

"The animal that died was on pasture in northwest Minnesota, an area that has seen anthrax in recent years, so it is important that other northwestern Minnesota livestock producers seriously consider anthrax vaccinations for grazing animals," said Linda Glaser, senior veterinarian on the Board of Animal Health.

The board said that about 260 farms have had animals diagnosed with anthrax since it was first reported in the state in 1909.

Communicated by:

ProMED-mail rapporteur Brent Barrett

[That the herd had not yet been vaccinated and it is past midsummer would indicate that the owner had decided to not vaccinate this year and was depending on prayer alone to protect his livestock. This reminds me of the year the sexton of the our village church, St.

Mary's, in north Oxfordshire won the award for the best garden show of flowers at the annual village flower show. And in truth the path to the church door was wondrous with roses in full bloom and other flowers. A well deserved award. The Rector when awarding the silver cup commented that it was wondrous what the Lord could do. The sexton was heard to quietly comment, "But you should have seen it when he had it to himself." In areas in high risk of anthrax the livestock must be vaccinated each spring. A constant that we are witnessing in Minnesota and elsewhere, e.g., Buenos Aires Province in Argentina, is how the immediate non-vaccinating neighbouring farms to those affected 1-3 years before are the ones at highest probability of having cases. If the neighbour has had anthrax, you must vaccinate too. - Mod.MHJ]

#### ANTHRAX, BOVINE, WILDLIFE - USA (TEXAS)

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A ProMED-mail post <<http://www.promedmail.org>>

Sent: Friday, July 13, 2007 9:12 AM

From: Texas Public Health Information Network <[TXPHIN@txphin.dshs.state.tx.us](mailto:TXPHIN@txphin.dshs.state.tx.us)>

Subject: TXPHIN (Texas Public Health Information Network) Health Alert

Anthrax Related Cattle and Deer Die Off in San Angelo Area

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The Texas Veterinary Medical Diagnostic Laboratory has confirmed [today - 13 Jul 2007 - Mod. MHJ] a positive anthrax culture on an animal necropsy specimen that was submitted from Tom Green County due to a cattle and deer die off that was reported by a private veterinarian on [6 Jul 2007] to the Texas Department of State Health Services. For a fact sheet on anthrax, please login to the PHIN Portal. Regional Zoonosis Control staff may also be reached at the following numbers: Dr. Kenneth Waldrup 915-834-7782, Erika Quinones 915-834-7780, Kathy Parker 432-571-4118. Please login to the PHIN portal for more information: <<https://texphin.dshs.state.tx.us>>

Texas Public Health Information Network

<[TXPHIN@txphin.dshs.state.tx.us](mailto:TXPHIN@txphin.dshs.state.tx.us)>

[A full press release from the Texas Animal Health Commission is awaited. To date, 17 cattle have died on the index ranch along with an unspecified number of white-tailed deer. Diagnosis was slow because the initial presumed diagnosis was a clostridial cause. So a 2nd necropsy was carried out and fresh tissue resubmitted to TVMDL College Station. The herd has now been vaccinated and is under surveillance. With this number of initial infected animals to load up the horseflies --- it has been raining --- I think we can confidently expect further cases in the surrounding ranches starting this weekend. As of yesterday (12 Jul 2007) the deer carcasses had not been disposed of. I suspect that the cattle carcass disposal was delayed. - Mod.MHJ]

#### ANTHRAX, BOVINE - CANADA (04)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Fri 20 Jul 2007

Source: Saskatoonhomepage.ca [edited]

<[http://www.saskatoonhomepage.ca/index.php?option=com\\_ezine&task=read&page=9&category=22&article=6566&Itemid=87](http://www.saskatoonhomepage.ca/index.php?option=com_ezine&task=read&page=9&category=22&article=6566&Itemid=87)>

Although the numbers aren't as high as last year [2006], anthrax continues to emerge in the province. There were 4 cases during the winter, one case in May 2007, and just this week [beginning 15 Jul 2007], there is a case in the RM of Torch River, which is in the Prince Albert area.

Sandra Stephens with the Canadian Food Inspection Agency says it's not uncommon for the spores to pop up.

Last summer [2006], 806 animals died on 153 farms, mainly in the northeast and north central part of the province.

Communicated by: ProMED-mail Rapporteur Brent Barrett

[Folks get very distracted by the big epizootics of anthrax as in Canada in 2006, but then pay no mind to the pitter-patter of sporadic cases in the intervening years. Unfortunately, it is those minor outbreaks that cause most of the problem. Because they get ignored and overlooked, the ground continues to be re-contaminated, and when the circumstances are right, instead of it just being one dead cow, it becomes 6 dead cows, then 5 neighboring ranches afflicted, and away it goes! In these enzootic areas such as SK & MB, MN, ND & SD -- and, it is now becoming clear, in certain areas in Texas -- it is necessary to vaccinate the livestock every year. And I don't mean just the ranches that had cases in the past couple of years. Yes, they are at heightened risk, but the seemingly quiet ranches can be having cases out of sight and will also be at risk of overflow from cases on neighboring farms.

The recent outbreak in Texas involved 17 cows because the new lease-holder had not bothered to vaccinate his 200+ head because he had been told that they hadn't had a case on the property, some 18 000 acres, in 5 years. His neighbors had vaccinated. He was slow off the mark when it started, and before a handle could be put on it, 17 were dead, nearly 10 percent. Being cheap cost him a lot of money in stock lost -- and there has since been one more cow and a horse dying, plus a neighboring ranch lost 4 head -- and he lost at least 10 deer. Sterne is possibly the cheapest livestock vaccine and very effective. So, when you are in a risk area, in the spring working, make sure that you use Sterne along with your routine Five-way or Seven-way and whatever other vaccines your stock get. When you vaccinate your stock, you protect them, you protect them from outbreaks on neighboring establishments, and you protect your neighbors: A bargain. - Mod.MHJ]

#### ANTHRAX, BOVINE - USA (SOUTH DAKOTA) (02): SEVERE HEAT STRESS

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Wed 25 Jul 2007

Source: South Dakota Animal Industry Board news release [edited]

Another case of anthrax in SD in 2007

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Anthrax has appeared in South Dakota livestock for the 2nd time this year [2007]. Dr. Sam Holland, State Veterinarian, reports the disease has struck a cattle herd in Brule County.

Anthrax was confirmed today, 24 Jul 2007, in a 100-cow cattle herd pastured southwest of Kimball. The death total was 11 head. This herd had not previously been vaccinated for anthrax. The herd was processed early this morning in accordance with the state veterinarian recommendations prior to lab confirmation which was received at noon today.

Dr. Holland reports there have been numerous reports of livestock losses, which evidence suggests are heat related. Some involve significant numbers of over 100 head. Producers are urged to seek veterinary advice whenever numerous deaths occur.

"I am having my staff collect samples from local veterinarians and hand delivering them to the Brookings lab to rule out anthrax, other infectious or toxic diseases," stated Dr. Holland.

It is important that producers take preemptive action in this heat in confinement settings to:

- a.) Ensure adequate good quality water ;
- b.) Provide shade if at all possible. Allow access to tree areas, improvising netting or such (allowing adequate air flow);
- c.) Timely sprinkling of animals with water from sprayers obtained from neighbors or farm supply companies such as elevators. Sprinkling must occur prior to heat exhaustion when animals' ability to regulate body temperature is lost;
- d.) Swine and poultry confinement operators are reminded to continuously monitor electricity and water supplies to avoid failure of exhaust fans, air curtains, etc.; and
- e.) Handling and transport must be avoided in the extreme heat, and exhibitions must monitor air flow, provide fans, water baths for livestock and continual supply of fresh water. This applies to animals and handlers alike.

Dustin Oedekoven, DVM  
Assistant State Veterinarian  
South Dakota Animal Industry Board  
411 South Fork Street  
Pierre, SD 57501-4503  
<Dustin.Oedekoven@state.sd.us>

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[2]

From: ProMEDmail.org

Date: 27 Jul 2007

Source: Associated Press [edited]

<<http://www.argusleader.com/apps/pbcs.dll/article?AID=/20070726/NEWS/70726016/1001>>

<<http://www.kxmb.com/News/147170.asp>>

Another case of anthrax hits South Dakota

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South Dakota's 2nd case of livestock anthrax this year [2007] killed 11 cows in Brule County, according to the state Animal Industry Board.

Anthrax spores occur naturally in the soil. Drought, floods or wind expose the spores and they can be ingested when livestock graze close to the ground.

The state's 1st case of livestock anthrax this year was in Brown County, where one heifer died.

Contributed by:

ProMED-mail Rapporteur Joseph P. Dudley and ProMED-mail Rapporteur Brent Barrett

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[3]

From: ProMEDmail.org

Date: 27 Jul 2007

Source: Brownfield Ag News for America [edited]

<<http://www.brownfieldnetwork.com/gestalt/go.cfm?objectid=0431919F-A040-CD68-C11DD2A9396EE03A>>

Heat kills South Dakota cattle, anthrax threatens

-----  
Over a thousand head of cattle in northeast South Dakota died from extreme heat stress Monday and Tuesday [23-24 Jul 2007]. And while the threat of cattle losses from extreme heat appears to be moderating in South Dakota, anthrax remains a threat to cattle across the state.

That's according to Dr. Sam Holland, South Dakota state veterinarian, who told Brownfield that after several days of high heat, high humidity and virtually no air movement, the cattle that perished earlier this week simply succumbed after losing the ability to regulate their temperature. And he says while such extreme weather conditions aren't unknown in South Dakota, they hadn't occurred in that part of the state for many years, catching the producers involved off guard. But according to Holland, further heat losses in South Dakota aren't likely.

"We've got people now getting out in the morning before the heat of the day, before these animals get heat stressed to where they start losing their ability to regulate their body temperature," Holland said. They're getting the water to them and getting them sprinkled and sprayed earlier."

Holland pointed out pork and poultry producers also need to be cognizant of the heat. He said if electricity to animal housing facilities goes out for even a short period of time, death losses can be total.

In the meantime, Holland said the hot and humid weather is also favorable for anthrax, and an animal tested positive for the disease Tuesday [24 Jul 2007] at a location south of highway I-90. According to Holland, when anthrax turns up in a cattle herd a whole cascade of consequences follow. That's why he strongly encourages South Dakota cattle producers to include anthrax in their vaccination regimen.

"I've never talked to a producer who's lost animals from anthrax that said, 'I'm sure glad I didn't vaccinate and waited to handle it once it occurred,'" Holland quipped.

Holland also urged quick testing for anthrax in the case of sudden cattle death loss. He said early diagnosis can help reduce costs related to containment and clean-up efforts.

[Byline:Peter Shinn]

Contributed by:

ProMED-mail Rapporteur Joseph P. Dudley

[High temperatures stress livestock severely. It is not unusual in some states to have large fans built into milking sheds and such to try to bring the summer temperatures down. The heat also significantly reduces the innate resistance and as a result brings down the LD50 necessary to infect and kill cattle with anthrax. Apart from animals dying from heat stress these herds will also witness a range of other conditions such as ephemeral fevers, increased mastitis rates and such indicative of a reduced health status. And tucked in amongst them will be cases of anthrax. These need to be identified so that soil recontamination is not allowed to occur and that the carcasses do not go for rendering and recycling. -Mod.MHJ]

#### ANTHRAX, OVINE - ARGENTINA (BUENOS AIRES)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Thu 26 Jul 2007

From: Ramon Nosedá <[rnosedá@laboratorioazul.com.ar](mailto:rnosedá@laboratorioazul.com.ar)>

On 24 Jul 2007 a pregnant ewe was found dead, the Navy kit was positive and the culture also.

The ewe was part of a herd of animals belonging to the Establecimiento Los Olmos, which belongs to the zone of Isorriesgo No. 5 of the Program of Alert and Response of the Partido de Azul [In that area 25 animals died - Mod.MHJ] during the outbreaks occurring during the months March 2006 to May 2006.

The cattle are on a vaccination plan every 120 days with Sterne strain and there were no deaths to date.

Dr Ramon Nosedá

Laboratorio Azul Diagnostico SA

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(B7300FXE) Azul - Pcia Bs As - Argentina <[rnosedá@laboratorioazul.com.ar](mailto:rnosedá@laboratorioazul.com.ar)>

<<http://www.laboratorioazul.com.ar>>

[Analysis of the outbreaks over 4 decades in the Prov. Buenos Aires has shown that there is a distinct tendency for them to recur in relation to specific shallow streams carrying rain runoff. This is an extraordinarily flat region of excellent grazing with cattle at high densities. If you stand in the bed of a pickup you can see thousands of cattle in any direction with great conformation and the nature of friendly puppies. When I visited the region recently I asked an estanciero (farmer) how many gauchos he needed to work his cattle through the shute. "Just myself," he said sounding as if I had asked a stupid question, which to them it was. I later watched him move 10 working bulls without problems from one field to another on his horse, walking, with his 2 dogs that frankly were more canine company than effective working cattedogs. As someone more used nowadays to murderous Brahma-cross cows it was extraordinary.

There is an active programme to control anthrax in this province and encourage annual vaccination, specifically in the region around Azul, which is succeeding slowly. As the Argentine Pampas are traditionally treeless -- trees have been introduced into urban areas and are found around some estancia (farm) buildings -- it is not possible to burn carcasses. Instead the unopened carcass is covered with lime and a heavy tarpaulin, and left to decompose. After 9 months the bones are recovered and the lime removed.

Occasionally a fox will get at a carcass and the damage has to be dealt with. It is not an epidemiologically optimum system for dealing with carcasses but under the circumstances it is cost effective and better than burying them. If a carcass is left unopened, i.e., no necropsy and scavengers are kept away, the interior pH falls rapidly as decomposition occurs, and within a few days this acid environment is lethal to the vegetative organism. And thus there is minimal sporulation. - Mod.MHJ]

ANTHRAX, BISON - CANADA (NORTHWEST TERRITORIES) (02)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 30 Jul 2007

From: Todd Shury

<[Todd.Shury@pc.gc.ca](mailto:Todd.Shury@pc.gc.ca)>

[Just got the following information from] Stuart Macmillan, the conservation biologist in wood buffalo. They have now found a total of 32 carcasses since the outbreak began, most of the over the weekend [28-29 Jul 2007] and today [30 Jul 2007]. They have incinerated 11, treated 2 with formaldehyde and left 19 that were too autolyzed or scavenged already. A total of 12 of these 19 carcasses were found this morning in one small prairie in very close proximity with the use of forward looking infrared (FLIR) in a helicopter. They were basically just hide and bones from what Stu told me.

They are also doing fixed wing surveillance flights in other areas of the park to see if there might be other areas affected, but nothing so far.

There seems to be 2 focal areas, Pine Lake where there is (was) a fire camp and the Parsons Lake Road area, which is about 15 km [about 9.3 miles] north of Pine Lake. All bison have been bulls so far with the exception of 2 cows.

It is going to continue to be hot and dry, so I suspect we may see more over the coming weeks. They will be continuing to do surveillance with the forward looking infrared (FLIR) over the next few days to see if they can spot any more carcasses. Apparently the stench of rotting bison from the group of 12 could be smelled from over 3 km [1.8 miles] away.

Dr. Todd Shury, DVM

Wildlife Health Specialist

Parks Canada

Room 1669B, Dept. of Veterinary Pathology Western College of Veterinary Medicine  
52 Campus Drive

Saskatoon, Sask. S7N 5B4 Canada

<[Todd.Shury@pc.gc.ca](mailto:Todd.Shury@pc.gc.ca)>

[The 1st dead bison was found on 17 Jul 2007 along Parson's Lake Road. It was treated with formaldehyde while burning was being organised and initiated on 20 Jul 2007. This case was later confirmed as anthrax by ADRI, Lethbridge. At that time there were no more cases. By 25 Jul 2007 a total of 6 bison carcasses had been located, treated with formaldehyde and incinerated. A 7th carcass was already partly dismembered by scavengers in a remote area -- it was pointless to treat it as the scavengers had been at it. By 27 Jul 2007 the total was 10 bison. On 29 Jul 2007 it was 20 -- 2 of these on the

shores of Pine Lake. All within the Parsons Lake Road - Pine Lake area thanks to ground searching and aerial surveillance with forward looking infrared (FLIR) technology in the area.

More information on the park including maps can be found at <[http://www.pc.gc.ca/pn-nt/woodbuffalo/index\\_e.asp](http://www.pc.gc.ca/pn-nt/woodbuffalo/index_e.asp)>. Parsons Lake Road and Pine Lake are southwest of Fort Smith. The present estimate for Wood Bison in the Wood Buffalo National Park (WBNP) is 5400. - Mod.MHJ]

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[2]

Date: 28 Jul 2007

From: Troy Ellsworth

<[Troy\\_Ellsworth@gov.nt.ca](mailto:Troy_Ellsworth@gov.nt.ca)>

Nothing to add from our perspective. We (government of the NWT) have stepped up our survey frequency for the Slave River Lowlands within NWT jurisdiction [and immediately north of the WBNP. - Mod.MHJ]. Most of the bison population in that area (our estimates) visually inspected and all tails wagging as of 23 Jul 2007.

Troy Ellsworth

Manager, Wildlife & Environment

Wildlife & Environment Department

Government of the NWT, Fort Smith, Canada

<[Troy\\_Ellsworth@gov.nt.ca](mailto:Troy_Ellsworth@gov.nt.ca)>

[So far the disease is limited to the Parsons Lake Road and Pine Lake areas. Past experience in the park and surrounding areas is that outbreaks are in discrete areas, independent of each other. When the disease is spread by biting flies, the survivors have a significant measure of herd immunity. The population of Wood Bison is made up of discrete mobs of bison cows with some adult males. Otherwise the males outside of the breeding season, which is now, roam off in pairs and trios. Our thanks to Troy, Todd, Stu and Nahum for keeping us informed in the midst of what must be a very busy time. - Mod.MHJ]

ANTHRAX, BOVINE - USA (NORTH DAKOTA)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 31 Jul 2007

Source: Associated Press [edited]

<<http://www.kxmb.com/News/148247.asp>>

Cattle anthrax cases reported in North Dakota

-----  
A cow in Traill County has tested positive for anthrax. State Veterinarian Susan Keller says it's the 1st case of anthrax in the state this year [2007]. Keller says the Traill County herd where the cow was found had about 18 animals. She says the herd has been quarantined and vaccinated.

Keller says anthrax usually appears in very wet or very dry conditions, when dormant bacteria spores in the soil are disturbed. Animals that consume the spores are exposed to

the disease. Keller says ranchers who find dead livestock should consult their veterinarians before disposing of the carcasses.

Last year [2006] in North Dakota, there were 4 confirmed cases of cattle anthrax in 4 counties. More than 500 animals 2 years ago in 16 North Dakota counties died from anthrax, the worst outbreak in state history.

Keller says ranchers have stepped up vaccinations since the record outbreak in 2005.

Communicated by:

ProMED-mail Rapporteur Joseph Dudley

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[2]

Date: 31 Jul 2007

Source: Grand Forks Herald [edited]

<[http://www.grandforksherald.com/articles/index.cfm?id=45474&section=News&freebie\\_check&CFID=46102667&CFTOKEN=51036911&jsessionid=8830ef173e201d57116e](http://www.grandforksherald.com/articles/index.cfm?id=45474&section=News&freebie_check&CFID=46102667&CFTOKEN=51036911&jsessionid=8830ef173e201d57116e)>

Cattle anthrax case in Traill County is ND's 1st in 2007

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A single cow in eastern North Dakota's Traill County has tested positive for anthrax, state veterinarian Dr. Susan Keller said in a statement Monday [30 Jul 2007]. The associated Traill County herd has been quarantined and vaccinated, according to the North Dakota Department of Agriculture. About 18 head of cattle were quarantined after 2 cows died. The 2nd was not tested, but showed the same symptoms as the confirmed case. Keller said it is safe to say it also had contracted anthrax. The animal was examined by Dr. Allen Hoverson, Cooperstown, ND, who forwarded tissue samples to the Veterinary Diagnostic Laboratory at North Dakota State University in Fargo, according to the release. The test confirmed the diagnosis Friday [27 Jul 2007], the release said. The case of anthrax did not affect any other herds of cattle, Keller said. "These cattle were not going to move anyway, so it worked out OK, except the man lost 2 cows," she said. Anthrax vaccines are readily available but take about a week to establish immunity, Keller said. Producers should make sure their animals are vaccinated, she said. Producers who find dead livestock also are urged to consult their veterinarians before disposing of carcasses.

In early July [2007], the Minnesota Board of Animal Health reported that a bull from a farm in Marshall County had died from anthrax about a week earlier. It was that state's first anthrax case this year [2007]. The herd, which was not identified, was to remain under quarantine for 30 days from the day when the bull died. The dead bull was discovered in a pasture. The Marshall County herd had not been vaccinated for anthrax and had since been taken off the pasture where the infection occurred, according to the Animal Board of Health.

Communicated by:

ProMED-mail Rapporteur Brent Barrett

[Now we cross our fingers and wait to see whether this year will mimic 2006 when there were only a few scattered single cases, or whether it will follow 2005 when there were many outbreaks. Rancher vaccination will play a significant role in preventing spread.-Mod.MHJ]

ANTHRAX, HUMAN, BOVINE, CANINE - KYRGYZSTAN (CHUYSK)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 10 Aug 2007

Source: Itar-Tass [edited]

<<http://www.itar-tass.com/eng/level2.html?NewsID=11782062&PageNum=0>>

Five people were hospitalized with anthrax in the Bishkek infectious diseases hospital, the press service of the republic's Interior Ministry reported on Friday [10 Aug 2007]. All the patients lived in a village in Bishkek's suburban Sokuluksky district, and "had contacts with infected cattle during slaughtering."

Two dogs also died after eating a slaughtered cow. Police found that the meat had been sold to the shop Yust at the Oshsky market, the largest in Bishkek.

"Measures are being taken to identify the contacts during the sale of the meat," a police report said. Veterinary services, assisted by law-enforcement personnel, are disinfecting the places where the cow was kept before it was slaughtered.

Communicated by:

ProMED-mail Rapporteur Brent Barrett

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[2]

Date: Thu 9 Aug 2007

Source: News Agency AkiPress [trans. Mod.NP, edited]

<[http://kg.akipress.org/\\_print.php?db=news&id=44168](http://kg.akipress.org/_print.php?db=news&id=44168)>

Two cases of anthrax have been reported in the Soluksky district of the Chuysk region of Kyrgyzstan, according to the Republican Center of Quarantine and Especially Dangerous Infections. On 7 Aug 2007, 2 inhabitants of the village of Gavrilovka, a married couple -- a 43-year-old man and a 51-year-old woman -- were admitted to the Republican infectious hospital with suspicion of anthrax.

In connection with this case, experts of the Republican Center Quarantine and Especially Dangerous Infections, Republican Clinical Infectious Diseases Hospital together with the Department of Veterinary Science have carried out the joint investigation. Experts visited a focus of infection and established that people had contracted the disease on 29 Jul 2007 through the slaughter of a sick cow. The 1st symptoms of disease -- high temperature, ulcers on the hands and forearms -- appeared on 5 Aug 2007. After that, they were given medical aid and were hospitalized. Now anthrax in these patients has been [laboratory] confirmed.

It has been discovered that the man had entertained his neighbors and relatives with gifts of meat.

On suspicion of anthrax, 3 more inhabitants of the village of Gavrilovka have been hospitalized in the infectious department of Sokuluksky district regional hospital for diagnosis and the carrying out of inspections.

Also, an urgent session of all interested organizations was held on 8 Aug 2007. A plan of measures for prevention of disease has been authorized by the commission. Quarantine-restrictive measures established in Gavrilovka are as follows: import and export of animals and cattle-breeding production is forbidden; enforcement of these restrictions in

the local markets is being amplified. The remaining meat was withdrawn in the center of an infection. Tests of ground and water are ongoing.

Some of meat from the sick cow made its way to a shop in the Osh market in Bishkek. At present, an investigation is underway there. The shop has been closed. Another portion of the meat the man had given to his mother. Physicians have now found and destroyed this portion. All contact persons who were taking part in the slaughter and butchering of the cow have received preventive treatment. Preventive measures in all markets of Bishkek selling meat and involved in animal production have been enforced.

Communicated by:

ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[In July 2007, a similar case took place in the Suzaksky district of the Zhalalabadsky region.

Cases of anthrax in Kyrgyzstan occur on a regular basis. Only last year (2006), according to data from the Ministry of Agriculture of the Republic, there were 1176 cases of anthrax in pets. See (in Russian):

<<http://www.advis.ru/cgi-bin/new.pl>>.

- Mod.NP]

#### ANTHRAX, LABORATORY EXPOSURE - USA (MISSISSIPPI)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Mon 13 Aug 2007 18:23:30 -0700 (PDT)

Source: ABC WAPT.com [edited]

<<http://www.wapt.com/news/13882436/detail.html?rss=jac&psp=news>>

A graduate student at Jackson's University Medical Center had to be treated for anthrax exposure over the weekend [11-12 Aug 2007].

The student was putting a flask of anthrax cells into a shaker when the shaker broke, hospital officials said. According to University Medical Center, the student followed all biosafety rules, and the Centers for Disease Control and Prevention (CDC) was notified. The graduate student was treated as a precaution and sent home.

Communicated by:

ProMED-mail Rapporteur Brent Barrett

[Back in the good old days when there were merely some 100 or so individuals worldwide doing research on *Bacillus anthracis* we would hear of such occasional misadventures, usually as a result of tubes collapsing during ultracentrifugation with spores going everywhere. In my own laboratory, because we had been sent so many archival contaminated and misidentified cultures, there was a strict prohibition on even thinking of any manipulations involving the Sterne strain -- one national and respected national collection shared with us was 20 percent Sterne. Spores fly and especially Sterne.

So I refuse to shake a finger at my colleagues in Mississippi except to note that they had promptly reported their accident. On the other hand in the flood of research money and with over 300 US institutes certified to handle *B. anthracis* -- to what productive purpose is not always obvious -- it is of real concern because, whatever the research objectives, they all seem to insist on having and handling "Ames", which is one of the more virulent

strains, and accidents will happen and laboratory contamination will occur, and possibly accumulate, vide USAMRIID (United States Army Medical Research Institute for infectious diseases). There is also the risk of a culture quietly walking when so many laboratories have them. - Mod.MHJ]

ANTHRAX, LIVESTOCK - USA (TEXAS): EQUINE

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 14 Aug 2007

From: Kenneth Waldrup

<[Ken.Waldrup@dshs.state.tx.us](mailto:Ken.Waldrup@dshs.state.tx.us)>

RE: Anthrax in horse

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On Mon 13 Aug 2007, the Texas Veterinary Medical Diagnostic Laboratory (TVMDL) has reported a case of anthrax in a horse. This case is in an endemic area approximately 20 miles from the earlier bovine cases in Tom Green County in July [2007]. Cattle on this ranch had been earlier vaccinated for anthrax, but the horses were not. Of 6 horses originally in the ranch, 2 were lost. The surviving horses have now been vaccinated. The carcasses of the 2 horses that succumbed have been incinerated.

Ken Waldrup, DVM

TxDSHS, El Paso <[Ken.Waldrup@dshs.state.tx.us](mailto:Ken.Waldrup@dshs.state.tx.us)>

[This area is enzootic to some in the know and the disease is an unknown to others. When I investigated the previous outbreak that killed some 25 animals on one ranch ten miles NNW of San Angelo I found that the owner's veterinarian was ignorant of the risk. Plus his client had vaccinated none of his some 250 head against anything including blackleg. A neighbour who had been losing geriatric cows believed that calfhood vaccination was all that was needed; fortunately his 10-15 year old cows had died of senecio poisoning and old age, not anthrax.

In this outbreak it is clear that there had been background cases probably in the whitetail deer as horses graze high and the horses succumbed to horseflies with contaminated mouthparts. Fortunately he had vaccinated his herd.

Texas needs to mount a more aggressive rancher information program in this region. - Mod.MHJ]

ANTHRAX, BISON - CANADA (NWT) (03)

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Date: 15 Aug 2007

From: Stuart MacMillan <[stuart.macmillan@pc.gc.ca](mailto:stuart.macmillan@pc.gc.ca)>

Anthrax update

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Here's a bit of a summary of where we are at with the anthrax situation here at Wood Buffalo National Park (WBNP):

A bison carcass found 17 Jul 2007, near a back-country road, tested positive for anthrax. Since then, 60 additional carcasses have been found. Most carcasses have been found in an area of approximately 500 square kilometers [193 square miles].

A total of 14 carcasses have been treated. Of these, 12 have been burned (using coal and wood) and 2 have only been treated with formaldehyde to discourage scavenging. The balance of the carcasses have not been treated as decomposition was very advanced and/or the carcasses had been scavenged, and there is little chance of public contact with the carcasses.

The last fresh carcass was found on 4 Aug 2007 and has been burned. We are continuing with detection efforts in the area of the current and historic outbreaks, but have only turned up a few older carcasses.

Stuart MacMillan,

Manager, Resource Conservation

Parks Canada - Wood Buffalo National Park Box 750, Fort Smith, NWT X0E 0P0

<stuart.macmillan@pc.gc.ca>

[Further details are promised. The population of wood bison in the park is around 5400. - Mod.MHJ]

#### ANTHRAX, HUMAN - GEORGIA (WESTERN)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 22 Aug 2007

Source: IA Novosti-Georgia [in Russian, trans. Mod.NP, edited]

<<http://www.newsgeorgia.ru/geo1/20070822/42037938.html>>

Paata Imnadze, head of the National Center for Disease Control, reported that so far this year [2007], 15 human cases of anthrax have been registered in Georgia. Normally 30-40 cases of anthrax are registered annually in Georgia. Recently 3 inhabitants of western Georgia are under medical care on suspicion of anthrax. In one case the diagnosis has been already excluded; 2 persons have been hospitalized in Zugdidi and Kutaisi where they continue to be medically monitored.

Paata Imnadze reminds the population that within the framework of the state program vaccination of cattle is available free-of-charge. He also has warned the population of the necessity, when cattle die, and anthrax is suspected, to immediately bury the animals in specially designated places and not try to keep the animal hides.

Communicated by:

ProMED-RUS

<[promed@promedmail.org](mailto:promed@promedmail.org)>

[One of a series of ongoing problems with anthrax in the old Soviet countries is that only human cases get reported with any frequency. The veterinary services are largely silent, whatever the reality on the ground. With the exception of Africa, where rural poverty ensures that any bovine anthrax case may feed a village and certainly a family, elsewhere there will be dead cattle that are not butchered for human food. But obviously it does happen and, unfortunately not infrequently, as in this instance in western Georgia. By the government response emphasizing the public health aspects, it in turn downplays the greater necessity of properly controlling and preventing this disease in livestock. At the

risk of being boring and repetitive, human cases of anthrax occur when veterinary services are not effective. This is primarily a livestock disease, which acquires human cases, largely through ignorance and greed. The latter are hard to control but the livestock cases can be prevented through vaccination and human exposure restricted through proper carcass inspection and management. - Mod MHJ

#### ANTHRAX, LIVESTOCK - CANADA (MANITOBA) (03)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Thu 23 Aug 2007

From: Martin Hugh-Jones <[promed@promedmail.org](mailto:promed@promedmail.org)>

Since this was 1st posted (ProMED-mail 20070808.2575) I have been in conversation with various folk in Canada as to what actually happened, compared to the initial news report. As of 22 Aug 2007, the number of positive premises for anthrax in the Interlake region of Manitoba is 22. Premises are defined by the quarter section. The time series is as follows:

11 Jul 2007 (1 outbreak, 1st deaths noted); 14 Jul 2007 (1); 15 Jul 2007 (2); 17 Jul 2007 (1); 22 Jul 2007 (2); 23 Jul 2007 (1); 24 Jul 2007 (2); 26 Jul 2007 (2); 27 Jul 2007 (1); 28 Jul 2007 (1); 1 Aug 2007 (1); 2 Aug 2007 (1); 3 Aug 2007 (1); 5 Aug 2007 (2); 7 Aug 2007 (1); 8 Aug 2007 (1); 12 Aug 2007 (1).

It seems that a meaningful number (actual number is being determined) of the initial 14 affected farms had 'recently' had Manitoba Hydro power lines installed across some ranches in an area, which had had anthrax at least as recently as 1942 (anecdotal human case buried in a local cemetery). This involved digging 9-ft (approx. 3 m) holes for each of the pylon posts. If true, this could explain the nature of the sudden series of cases in an area not known to have active anthrax.

Also, that the 1st samples were received in Winnipeg on 18 Jul 2007; positively checked for capsulated organisms and so promptly reported; laboratory culture confirmation on the 20 Aug 2007 ... all in all, very much on the ball.

As soon as the initial diagnosis was provided CFIA (Canadian Food Inspection Agency) promptly mobilized their Winnipeg store of some 3-5000 doses of vaccine and the ranchers were actively encouraged to get their stock vaccinated as soon as possible. For whatever reason ranchers were not advised to treat exposed stock with LA200 prior to vaccination. The region is in the interface between deciduous broadleaf trees and conifers, with meadows and not open grasslands, so collecting up stock does take time and effort.

As there have been no new outbreaks in the past week, it is probable that this small epidemic is now over. The premises are clustered in an area where the boundaries of these 3 municipalities meet (Rural Municipalities of Armstrong, Rockwood and St. Andrews). The cluster is fairly tight, with the furthest ranches being some 5 miles (8 km) to the east and 6 or so miles (about 10 km) to the NNW of the index outbreak. Of the 22 premises, 7 had some form of excavation in the recent past on the pasture involved in the outbreak. This part of the Interlake region experienced heavy rains this spring [2007] and

was hot and dry in late June and in July [2007] -- a classic 'Texas Paradigm' scenario for horsefly-spread anthrax. The region also has swampy areas.

I very much appreciate the input from the following persons: Wayne Lees, chief veterinary officer, Manitoba Agriculture Food, and Rural Initiatives, MAFRI; Sandra Stephens (CFIA, SK); Gopi Nayari (MB Veterinary Services Branch); Chris Green (MAFRI), Terrey Whiting (MAFRI), Lynn Bates (CFIA, MB).

#### ANTHRAX, BOVINE - USA (MONTANA)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 28 Aug 2007

Source: Associated Press [edited]

<<http://www.montanastation.com/global/story.asp?s=6990618>>

Anthrax kills cattle in northeastern Montana

-----  
A total of 8 cows in Sheridan County died from anthrax last week [20-24 Aug 2007], and state livestock officials say they won't be surprised if more cases are reported this year. Montana Department of Livestock spokeswoman Lisa Schmidt says the dead cows were part of a single herd on a ranch near Raymond, which is between Plentywood and the Canadian border.

Schmidt says the infected cattle were buried 10 feet underground in an effort to keep the disease from spreading further. She says the latest cases were confirmed Friday [24 Aug 2007]. Livestock officials say once an outbreak starts, other cases in the area are possible. Dr. Jeanne Rankin is Montana's acting state veterinarian. She says livestock owners should contact their veterinarians immediately if their livestock are lost in sudden, unexplained deaths.

Contributed by:

ProMED-mail

<[promed@promedmail.org](mailto:promed@promedmail.org)>

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[2]

Date: 28 Aug 2007

Source: Farm Ranch Guide [edited]

<[http://www.farmandranchguide.com/articles/2007/08/24/headlines/the\\_prairie\\_star/ag\\_news/updates/update61.txt](http://www.farmandranchguide.com/articles/2007/08/24/headlines/the_prairie_star/ag_news/updates/update61.txt)>

Anthrax claims 8 cows in Montana's Sheridan County

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Laboratory results confirmed anthrax as the cause of death of 8 cows last week in a single herd near Raymond, MT, according to the Montana Department of Livestock. Local and state animal health officials have visited the location and have taken appropriate measures to prevent further spread of the disease. Field investigations indicate this was a naturally occurring case of anthrax and has been limited to one ranch. Neighboring ranches have been notified.

The last reported case of naturally occurring anthrax in livestock in Montana was reported in 2005 in Roosevelt County, and before that, 2 unrelated cases in 1999, one occurring in Yellowstone County and another outbreak later that year in McCone County. Acting state veterinarian Dr. Jeanne Rankin said anthrax spores are known to exist in soils in certain regions of Montana, and that isolated cases of anthrax can be expected to occasionally occur in the state. Outbreaks have occurred in both North Dakota and South Dakota this season, indicating climatic conditions are favorable for such a naturally occurring outbreak. Rankin urges livestock owners to contact their herd veterinarian immediately to investigate incidents of sudden, unexplained deaths in their herd.

[For a similar article, see:

<<http://www.billingsgazette.net/articles/2007/08/28/news/state/33-anthrax.txt>>

I contacted Jeanne Rankin, MT Assistant State Veterinarian, who kindly filled in some of the blanks. Apparently Sheridan country had not knowingly had any cases of anthrax since 1934. In early July 2007, there was monsoon-like rain and hail, with devastating effect on crops. It is now hot and dry. The owner, who is trying to harvest his damaged crops and thus distracted, had noticed one cow dead. A neighbour flying over the ranch noticed 2 others down and informed the owner. The cows had access to good grass, though now it is short, and adequate water. The carcasses were found on the hillsides, not in any alkali drainages as in Roosevelt County in 2005. Heavy rains have long been associated with anthrax outbreaks. One can only speculate as to why, but 2 events are likely: [1] erosion of old anthrax graves; and [2] the rising water table bringing buried spores up to the surface and into the rootmass of the grazing, which is now easily ripped apart by any grazing cow.

To see the location of Raymond, MT, go to:

<<http://www.fallingrain.com/world/US/30/Raymond.html>>

- Mod.MHJ]

#### ANTHRAX, HUMAN, OVINE - MONGOLIA (ARKHANGAI)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 29 Aug 2007

Source: People's Daily [in Chinese, trans. Rappt.DS, edited]

<<http://world.eastday.com/eastday/06news/world/w/20070828/u1a3073394.html>>

Local media reports that a 65-year-old herder in Tuvshruulekh sum [district] of Arkhangai Province in Mongolia recently contracted anthrax. The herder had contact with sick sheep a week ago and later was confirmed to have contracted anthrax. The county head has already ordered the outbreak area closed and more than 2000 heads of livestock vaccinated.

Recently, cases of anthrax in humans and livestock have occurred in several provinces of Mongolia, and one person has died. Mongolian agencies remind citizens not to touch the carcasses of diseased livestock, [so as] to prevent transmission of anthrax.

[Byline: Wen Huo]

Communicated by:

ProMED-mail Rapporteur Dan Silver

[The form of anthrax that occurred in the herder is not stated. There is no mention of a fatality in this case so it may well be that the disease was limited to the cutaneous form. Mongolia has had a number of reports of livestock and human cases of anthrax as can be seen by the archives listed below.

Arkhangai aimag is one of the 21 aimags (provinces) of Mongolia. It is located slightly west of the country's center, on the northern slopes of the Khangai Mountains. More discussion, and its location on a map can be found at:

<[http://en.wikipedia.org/wiki/Arkhangai\\_Province](http://en.wikipedia.org/wiki/Arkhangai_Province)>. - Mod.LL]

#### ANTHRAX, BOVINE - RUSSIA (BURYATIA)

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Date: Tue 3 Sep 2007

Source: IA Regions [in Russian, trans. Corr.ATS, edited]

<<http://www.regions.ru/news/2094791/>>

A slaughtered 1.5-year-old animal has been preliminarily diagnosed with anthrax in the settlement Kiren in the Tanukin region of Buryatia. The final diagnosis will be available in 10 days, as the biological tests are finalized. Preventive measures are being taken in the settlement. The [slaughterhouse] is fenced and the land is disinfected. Veterinary doctors control the animals in the 3 neighboring streets. All the people who could get infected are being followed up. There are no new cases up to this date [3 Sep 2007].

Communicated by:ProMED-RUS <[promed@promedmail.org](mailto:promed@promedmail.org)>

[There are more than 200 cattle burial places of anthrax animals in the 19 regions of Buryatia. This constitutes a constant risk for new cases, both among animals and humans. As in the other regions of the country the exact places are often not known. Currently in Buryatia the animal products are being supplied to customers directly by producers and the only control mechanism is the veterinary service, which is not available everywhere, see <<http://pressa.irk.ru/number1/2006/33/001004.html>> (in Russian). - Mod.NP

Taking 10 days to confirm a diagnosis of anthrax indicates that the oblast veterinary diagnostic system is creaking, as it should only take 2-3 days at the most. Of course this delay might reflect the condition of the carcass or meat when the situation was discovered. You will note that a number of people are under medical supervision. So, unfortunately, this is probably the same-old, same-old Russian story. One day we may read a veterinary report from Russia of an anthrax outbreak, which does not involve humans. Another interesting aspect is that animals in the 3 neighbouring streets are under surveillance. This suggests that the affected animal was in someone's backyard in Kiren, not unlikely with an animal this young but as it is summer it should be out grazing on pasture. But it could have been grazing in a common field next to the village, as in Bavaria. - Mod.MHJ]

Buryatia is located in the South-Central region of Siberia along the eastern shore of Lake Baikal and bordering Mongolia; it can be located on the map at

<<http://www.lib.utexas.edu/maps/commonwealth/russiaaddivisions.jpg>>. CopyEd.MJ]

ANTHRAX, ANIMAL SKIN - USA (CONNECTICUT)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 5 Sep 2007

Source: WTNH

<<http://www.wtnh.com/Global/story.asp?S=7029482&nav=3YeX>>

Danbury (WTNH)\_ Two people in Danbury have been infected with Anthrax contracted from animal skins.

Officials say Ase-AmenRa Kariamou contracted 'cutaneous anthrax' from animals skins brought from Africa to make a drum. Kariamou makes and restores drums made of animal hides.

"In most cases cutaneous anthrax, even inhalation anthrax in the United States comes from actually handling animal hides," said Dr. James Hadler, Connecticut Department of Public Health.

Danbury Police Captain Robert Myles told News Channel 8 a member of the victim's family also contracted the disease from contact with the anthrax bacteria.

In a live interview on News Channel 8 @ Noon, Mayor Mark Boughton said it is "not possible" for anyone to catch anthrax from this man.

"This kind of anthrax is what's called 'cutaneous anthrax', it is not known to spread from person to person," said Boughton.

Health officials say cutaneous anthrax is not contagious and can usually be treated with antibiotics. Both people are out of the hospital and expected to make a full recovery. Police closed off an area located on Route 37 near the intersection of Pembroke and Padanaram Roads. Emergency crews at the scene are wearing protective suits and a decontamination unit has been set up outside the home.

The FBI says it's aware of the situation, but says it is not a case of terrorism.

Communicated by: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[Acquisition of anthrax from handling contaminated animal hides as in this case is a well known phenomenon. The result may be either inhalational anthrax or as in this case cutaneous anthrax. - Mod.DK]

ANTHRAX, ANIMAL SKIN - USA (CONNECTICUT) (02)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Sept 6, 2007

Source: NewsTimesLive.com

<[http://www.newstimeslive.com/news/story.php?id=1186570626&source=big\\_barker](http://www.newstimeslive.com/news/story.php?id=1186570626&source=big_barker)>

Published: Sept 6, 2007, 6:07am

Anthrax hits Danbury

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Diagnosis of 2 residents raises fears, closes part of Route 37

The revelation Wednesday [5 Spp 2007] that 2 residents had contracted anthrax raised concerns throughout the city and shut down one major thoroughfare for more than 24

hours. Numerous city, state and federal health, law enforcement and governmental officials joined forces to deal with the issue, and Danbury municipal and school officials alerted residents to the problem. In a press conference Wednesday afternoon, officials tried to calm possible fears about the spread of anthrax by emphasizing that the type of anthrax contracted by the residents is not a communicable disease.

In a subsequent, hastily called press conference at 10 p.m. Wednesday, state officials said they were preparing to take samples from a house, a shed and some soil along Padanaram Road to see whether any contamination had occurred. Officials said they considered contamination unlikely and said they expected to make that determination by midnight Wednesday. If officials do discover contamination, they said, a cleanup would likely take several days.

According to officials, two city residents contracted cutaneous anthrax -- a form of anthrax that develops under the skin -- last month after working with imported animal hides used to make African drums.

The state Department of Public Health made the diagnosis official Tuesday. They are reportedly the first cases of cutaneous anthrax in the state in almost 40 years. That news forced the city to reroute traffic off the heavily traveled Padanaram Road from Jeanette to Stacey roads throughout most of the day, as city, state and federal officials investigated the matter and removed hides from a barn used as a workshop at 69 Padanaram Road. City and state officials refused to give the names of the patients [one of whom is an African drummer and drum maker.] .An emergency response team from the state Department of Environmental Protection [DEP] was preparing to enter the property late Wednesday to take samples from inside the house, from a shed and from the soil. "If there is serious contamination outside the shed, that will be a longer process, possibly a matter of several days," said Mike Nalipinski of the federal Environmental Protection Agency. But that was a worst-case scenario, he said, and officials last night played down the possibility. "We've erred on the side of safety and caution," Danbury Mayor Mark Boughton said.

The EPA had earlier notified five surrounding neighbors there would be a lot of light and noise in the area throughout the night and that they should consider seeking other quarters to escape the commotion. Fifteen residents of six neighboring homes were evacuated, and Padanaram Road will stay closed at least until noon Thursday, Boughton said. "This was not done as a health issue," Boughton's chief of staff, Michael McLachlan said. "It was done as a courtesy."

At a press conference at City Hall Wednesday, staff from Danbury Hospital and the state Department of Public Health emphasized the cases pose no health risk to the general public. Anthrax is not a communicable disease -- it doesn't spread from one person to the next like tuberculosis or influenza, they said. Officials noted that the two people who contracted the disease are getting antibiotics and are recovering completely.

"Our message to the public is: If you were not working with these hides, you are not at risk," said Dr. Patrick Broderick, chairman of the hospital's department of emergency medicine. Simply going to a concert where African drums are played, or going to a class to play them, poses no risk to anyone.

However, Broderick said area doctors, unsure what to do, began referring patients to the Danbury Hospital emergency department Wednesday. "We received dozens and dozens of calls," he said. "We call them 'the walking well.'" City residents learned of the situation

from news reports. The city also used its reverse 911 system to alert residents to the case. Mayor Boughton said that in doing this, the city was simply following proper protocols for dealing with anthrax-related cases. After learning Tuesday the two people had tested positive for anthrax, Boughton said the city informed the state police and the FBI. On Wednesday morning, police, fire and health officials gathered en masse at the North Street Shopping Plaza. By 10 a.m., they'd sealed off a stretch of Padanaram Road between Jeanette and Stacey roads, closing the road to all traffic. While it's unlikely any spores from the site could get into passing cars, Boughton said, the city did this as an extra precaution.

Dr. James Hadler, chief epidemiologist with the state Department of Public Health, said the hides in the Danbury case were either goat or cattle hides, probably imported from Africa. Hadler said the state Health Department would zero in on about a dozen hides, seeing if they can find anthrax on them. He also said the state will be working with federal officials to see if hides from the same shipment are circulating elsewhere in the United States.

Cutaneous anthrax is rare, with only one or two people being infected with anthrax in the United States every year, Hadler said. The state Department of Public Health said the last cutaneous anthrax case in Connecticut occurred in 1968, pointing out that it's a difficult disease to get. While inhaled anthrax, which affects the lungs, is more deadly, most of the few anthrax cases in the United States are cutaneous anthrax, in which the bacteria gets into the body in a small cut or abrasion, gets under the skin and manifests itself as a black-scabbed sore.

Dr. Gary Schleiter, chief of the infectious disease department at Danbury Hospital, said that even without any medication, 80 percent of cutaneous anthrax patients recover on their own. The two patients in Danbury were otherwise healthy. "It's not painful," he said of the sores. "But it's not pretty." [Very true. MHJ] But the bacteria can spread, causing swollen lymph nodes, fever, nausea and vomiting. With modern antibiotics, Schleiter said, the cure for cutaneous anthrax is practically 100 percent. Therefore, there's no reason for people to worry about getting the disease or to take anything to prevent it. "There's no need for anyone to get prophylactic antibiotics unless they were in the workplace where the drums were made," said Broderick of the emergency department. (Byline: Robert Miller)

#### Anthrax Timeline

**EARLY TO MID-AUGUST:** A Danbury man develops a sore with a black scab on his arm.

**LATE AUGUST:** A relative develops a similar, smaller sore and scab.

**LAST WEEK:** They are examined at Danbury Hospital, and bacteria specimens are taken from the two sores. Both test negative for anthrax. Danbury Hospital sends tissue samples to the state Department of Public Health for DNA tests. Both come back positive for anthrax.

**TUESDAY [Sept 4]:** Danbury city officials learn of the positive tests. Following operating protocols, the city alerts the state police and the FBI.

**WEDNESDAY [Sept 5]:** City officials close a section of Padanaram Road to inspect the home of the patients. They find animal hides used for making drums and rule out terrorism. State health workers remove the hides for testing.

Officials expect to open Padanaram Road at noon today.

[Patently this took time to develop. There are various links at the bottom of this page. One of the more informative for those of us not living in Danbury is:  
<[http://www.newstimeslive.com/news/story.php?id=1186570588&source=related\\_stories](http://www.newstimeslive.com/news/story.php?id=1186570588&source=related_stories)  
Mod MHJ]

#### ANTHRAX, HUMAN - INDIA (ANDRA PRADESH): SUSPECTED

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 7 Sep 2007

Source: NewindPress.com [edited]

<<http://www.newindpress.com/NewsItems.asp?ID=IEA20070906033339&Page=A&Headline=Suspected+Anthrax+in+Vizianagaram&Title=Southern+News+-+Andhra+Pradesh&Topic=0>>

A suspected anthrax case was detected in Jammayyapeta village of Bhogapuram mandal in Vizianagaram district on Wednesday [5 Sep 2007]. A doctor from Tagarapuvalasa in Visakhapatnam district, NL Rao, claimed that a shepherd's son, (age 15), has been suffering from anthrax for 5 days.

The case was clinically confirmed; however, [laboratory] confirmation is yet to be done. [The patient] was diagnosed for anthrax when he came to Rao for treatment. He was referred to King George Hospital in Visakhapatnam. Rao also claimed to have detected 8-10 anthrax cases during the past 10 years.

Communicated by: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[There is nothing extraordinary about this report, but it is a ProMED 1st for Andhra Pradesh apparently. I have known Dr NL Rao for some time now and if he thinks it may be anthrax, it probably is. Logically the boy would have been infected as a result of skinning a sheep dead of this disease. We await news of confirmation. The disease clusters along the eastern states of India. - Mod.MHJ]

#### ANTHRAX, HUMAN, BOVINE - RUSSIA (BURYATIA)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Thu 6 Sept 2007

Source: IA "Gazeta" [translated by Mod.NP, edited]

<<http://gzt.ru/incident/2007/09/06/105951.html>>

Anthrax has been diagnosed in an inhabitant of the Tunkinsky district in Buryatia. The affected person, who has been hospitalised, participated at the end of August [2007] in the slaughter of cow which, apparently, was infected by anthrax.

The directorate of the Ministry of extreme situations in the Republic of Buryatia informed that quarantine measures have been applied in the affected district. This includes disinfection check-points on the Federal highway Ulan-Ude - Mondy, where vehicles undergo sanitary procedures.

A total of 500 doses of a human anthrax vaccine and 10 000 doses of animal vaccine have been delivered in the district. The villages Kyren and Khuzhyr are considered to be

in a high risk area, but so far no symptoms of disease have been recorded in animals. More than 130 persons from the high risk area, or those who might have been exposed to the slaughtered sick animal, have been contacted, medically checked and found healthy.

Communicated by: ProMED-mail <promed@promedmail.org>

[For the earlier history of this case, see post 20070905.2924 and item [2] below. - Mod.AS].

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[2]

Date: Wed 5 Sep 2007

Source: Pressa.irk.ru [trans. from Russian, edited].

<<http://pressa.irk.ru/number1/2007/36/002010.html>>

On 29 Aug 2007 a sick animal was slaughtered in Kyren village, in the Tunkinskoye [Tunkinsky] district, without the presence of a veterinarian. A total of 5 people attended the slaughter.

To confirm the suitability of the meat, the owner sent biological material (liver, heart) to be examined in the [local?] Veterinary Laboratory, which tentatively suspected anthrax ["Siberian ulcer"]. On 31 Aug 2007 material was sent for confirmation to the RMT "Republican veterinary laboratory for science and production," which confirmed anthrax. All 18 people which were in contact with the sick animal and the contaminated meat were placed under medical observation. According to preliminary data, the background to the case and to exposure of persons who are not animal owners, is the lack of [cattle] vaccination.

According to available information, there are 25 locations in the Tunkinsky district where anthrax had been recorded in the past [thus areas where animals should be permanently be vaccinated and revaccinated, for many years. - Mod.AS].

The authorities urge the public to purchase meat and meat products only from recognised, veterinary-controlled sources and to avoid any purchase from unknown persons.

Communicated by: ProMED-mail <promed@promedmail.org>

[The location of Kyren can be found on the map at

<<http://www.fallingrain.com/world/RS/11/Kyren.html>>.

For further background on the anthrax situation in Buryatia, subscribers are referred to both moderators' commentaries in post 20070905.2924. - Mod.AS.]

#### ANTHRAX, BISON - CANADA (ALBERTA)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Tue 11 Sep 2007

Source: Fairviewpost.com [edited]

<<http://www.fairviewpost.com/News/337854.html>>

An outbreak of anthrax in the Municipal District of Fairview has Peace region livestock producers wondering what they can do to avoid similar incidents on their own farms -- the answer to which is, very little.

The Canadian Food Inspection Agency (CFIA) has been monitoring the situation on a bison farm south of Bluesky since 23 Aug 2007, where the deadly bacteria have killed 52

of the animals to date (Fri 6 Sep 2007. The owner of the farm adamantly refused to comment on the situation, directing all questions to the CFIA.

Confidentiality regulations also prevent the CFIA from commenting on specific cases, but a media representative did confirm that a case of anthrax was reported in the MD [Municipal District] of Fairview and that 52 bison have died as a result.

Anthrax spores lay inactive in the soil after the death of an infected animal. There is a good chance that the anthrax we're seeing today is a result of the bison that once roamed freely in this area hundreds of years ago, said Dr. Lloyd Keddie of the North Peace Animal Hospital in Fairview. When the spores are ingested, inhaled, or come into contact with an open wound, the bacteria become active and can kill the animal in less than 2 days, depending on the strain of anthrax involved, he said. "It can take anywhere from several hours to one or 2 days. It's very quick."

Ingestion is the most common means of transmission in livestock, and occurs when soil is disturbed or overturned, exposing the bacteria to the animals, he said.

Because of its highly fatal nature, the 1st sign of anthrax infection in a herd is often the death of one or more animals. Anthrax may cause the corpse of an animal to expel bloody fluids, bloat rapidly after death, and it may not stiffen from rigor mortis. Other infected animals in the herd may lose their appetite, have difficulty breathing, and will have swelling in their lower jaw area.

If a producer suspects anthrax, the CFIA stresses that they do not handle the carcasses at all. They are advised to contact their veterinarian immediately. The veterinarian will evaluate the scene and contact the CFIA if anthrax is involved. All cases of anthrax must be reported to the CFIA under law.

Anthrax occurs all over the world, and in Canada it is most common in areas between Alberta and Western Ontario. It is relatively uncommon in this particular area though, said Keddie.

"We're starting to see a bit more of it in Western Canada for sure; Saskatchewan and different parts of Alberta, so it's not that peculiar to this area, it's all over, but it's still something new to the majority of farmers in this area."

There have been 4 other cases in Alberta this year [2007] with one in Clearwater County, one in Cypress County, and 2 in the MD of Bonnyville, all to the southeast of the Peace country. These cases killed a total of 4 cattle and 38 bison.

The disease is so rare in this area that Keddie says he does not know of one Fairview area farmer who vaccinates their animals for anthrax. "It's just not that common, it's very uncommon," he said.

Keddie suggests producers decide on a herd-by-herd basis for vaccinations, and weigh the risk against the cost of not only the vaccine but the cost of administering the vaccine. "There's lots of farmers who have been farming here for more than 30 or 40 years, and have never vaccinated for it and have never had it and probably will never get it," he said. The situation on the [affected] farm is ongoing, and the remaining bison will be quarantined for 21 days following the last death of an animal, or 21 days after the vaccine is administered, whichever is longer, according to CFIA regulations.

[Byline: Chris Zwick]

Communicated by:

ProMED-mail <promed@promedmail.org>

[Checking out this village, it is NW of Edmonton and well south of any other outbreaks on the Peace River that I know of. A number of years ago the disease had made its way west from the Peace River delta, a wet area where the river turns north at Fort Chipewa to enter the Wood Bison National Park. Bison bulls wandering west had taken the disease to the cattle herds summering on the Indian reservation pastures. Later these herds took the infection south to affect 3 herds in the Edmonton area. So it is understandable that the Fairview ranchers didn't know what was happening to them. ADRI (Animal Disease Research Institute, CFIA), Lethbridge, will have the cultures from this outbreak and should be able to genotype them to see if this is a cattle strain or a Wood Bison strain. That it has apparently killed so many bison would indicate that it might be a Wood Bison strain.

But as this pathogen does not appear from nowhere investigations would be worthwhile in the area to see if there was a recent history of unexpected but uninvestigated deaths in livestock and farmed bison. With 52 dead bison the fly-loading with anthrax spores will be significant and therefore all cattle and farmed bison in the area should be vaccinated as soon as possible. - Mod.MHJ

#### ANTHRAX, HUMAN, BOVINE - KYRGYZSTAN (OSH)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 19 Sep 2007

Source: Press-UZ News Agency [in Russian, trans. Mod.NP, edited] <<http://www.press-uz.info/ru/content.scm?topicId=2803&contentId=114718>>

Two inhabitants of the village of Orke in the Zhapalak district of Osh region have been admitted to hospital with suspicion of anthrax. Aychurek Keldibekova, the senior epidemiologist of the city center of State Sanitary-epidemiological supervision has reported that following laboratory investigations the preliminary diagnosis has been confirmed.

According to the physicians treating these patients, as of [19 Sep 2007], there is no danger for their lives. But the physicians are afraid that the number of ill persons may increase, as [that the incubation] period is 14 days. In this regard, epidemiologists and veterinarians are working to prevent further human cases of this disease. Persons who have had probable contacts with these patients are also under medical supervision.

[Strange as this is not a contagious disease. - Mod.MHJ]

According to the epidemiologists, this is the 1st case of [human] anthrax in the territory of Osh in the past 10 years. As of [19 Sep 2007], there are 16 old foci of anthrax, 2 of which remained under constructions. For the remaining foci, prophylactic measures are carried out every spring and fall. [This involves taking soil samples. - Mod.MHJ]

Specialists are wary, as it was exactly at this place 10 years ago that the last cases of [human] anthrax were recorded.

communicated by: ProMED-RUS <[promed@promedmail.org](mailto:promed@promedmail.org)>

[According to the Press-UZ News Agency report of 21 Sep 2007 (see <<http://www.press-uz.info/ru/content.scm?topicId=2803&contentId=116043>>, in Russian), one person took part in the necessary [?] slaughter of 3 cattle in a private farm belonging to an inhabitant of the village of Orke. After slaughter, part of the meat was distributed among inhabitants

of the village and another part was given for sale in a meat shop in Osh. Duration between these hospitalizations is 4 days. There are no epidemiological data in the message about any other persons. - Mod.NP

While there may not have been any human cases reported latterly in Osh, there have been livestock cases there and recently, and in the adjoining Uzbek province. That whole neck of farmland is awash in anthrax, unfortunately. It is not simple for a number of reasons. Firstly, though the Kyrgyz are expert livestock owners and their stock are closely watched, it is all done without fences and the usual corrals and shutes that we take for granted in North America. Therefore any stock manipulation is difficult, including routine vaccinations.

Secondly, funding to the livestock service stops short of being effective, such as an absence of vehicles and fuel.

Thirdly, because funding is so poor, they have extreme difficulty getting any veterinarians to work in rural areas. All of which begins to explain why human cases are reported more often than livestock cases. This is not unique to Kyrgyzstan, but extends throughout Central Asia and Russia. - Mod.MHJ

#### ANTHRAX, ANIMAL SKIN - USA (CONNECTICUT) (03)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Thu 20 Sep 2007

Source: NewsTimesLive.com [edited]

<[http://www.newstimeslive.com/news/updates.php?id=1186571498&source=news\\_updates](http://www.newstimeslive.com/news/updates.php?id=1186571498&source=news_updates)>

Anthrax Still Present In City Home

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Anthrax spores still contaminate a home on Padanaram Road in Danbury, CT, despite an expensive and complicated attempt to clean them last week [10-14 Sep 2007]. "We are continuing to see hits in the house," David Deegan, spokesman for the Environmental Protection Agency's New England office, said Thursday [20 Sep 2007]. However, Deegan said a barn behind the house, where the anthrax contamination was more severe, appears to be clean.

Because of the continuing contamination at the house, state and federal health officials will meet today at City Hall to discuss what steps they need to take next. Deegan said they'll announce their plan of action after the meeting.

A drum maker brought the anthrax spores to the site in August [2007], carrying them on goat hides he was using to make drum heads. He and a family member developed cutaneous anthrax -- anthrax infection under the skin. When doctors diagnosed the disease this month [September 2007], it triggered a complicated, and expensive clean-up of the site that closed a quarter-mile section of Padanaram Road for 6 days over the past 2 weeks. It's unclear whether the next phase of the clean-up will also involve closing the road.

"Obviously, we'd prefer it to stay open," Mayor Mark Boughton said Thursday [20 Sep 2007]. "But the EPA is calling the shots. We're here to facilitate their efforts."

[Byline: Robert Miller] Communicated by: ProMED-mail <promed@promedmail.org>  
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[2]

Date: 28 Sep 2007

Source: NewsTimesLive.com [edited]

<<http://www.newstimeslive.com/news/story.php?id=1186571636&category=Local%20News&keyword=anthrax&searchtype=AND>>

EPA may fumigate Danbury house

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State and federal authorities said Friday they may assemble a tent around an anthrax-tainted house on Padanaram Road in Danbury, CT, then pump it full of a gas that could kill the anthrax spores that remain inside. While there is a 2nd option -- to go back into the house, wash and vacuum all of its interior and remove its carpets -- they said fumigation is their 1st choice because it would be more thorough and less destructive.

"What we really want to do is take a whole-house approach," said Dr. James Hadler, chief epidemiologist at the state Department of Public Health.

Michael Nalipinski, on-site coordinator for the Environmental Protection Agency (EPA), said Friday [28 Sep 2007] there's no timetable for starting either approach. "There are only a couple of contractors in the country that do this work," Nalipinski said of the fumigation. "We don't know what work they're doing now, and when they could fit this into their schedule. They need to know things like the size and square footage of the house."

The EPA will pay all the costs of the clean-up. The city is applying for a USD 25 000 grant from the agency to recover the costs of policing the site.

A local musician and drum-maker contaminated his car trunk, the barn behind the house, and the house itself with anthrax spores in August [2007] when he purchased goat skins in New York City to use for drum heads. Unbeknownst to him, anthrax spores -- which are like seeds that can break open into live bacteria -- fouled the skins.

State health officials confirmed earlier this month [September 2007] that the drum-maker and a family member had contracted cutaneous anthrax -- an infection that occurs underneath the skin, causing an oozing, black-scabbed sore. The disease is not contagious and the 2 are taking antibiotics and recovering from their infection. The discovery of the disease triggered a complex and expensive operation to test the site for spores and clean it up.

The barn, where the drum-maker stored the skins and fashioned them into drum heads, was the most contaminated site on the property. "If you wanted to stick your finger in and get some spore samples, that was the place," Hadler said. The 4-day cleanup of the site last week succeeded in ridding the car and barn of spores. But Hadler and Nalipinski said even while crews were cleaning the house, they took samples that showed the low-level contamination there was more widespread than they had thought.

Rather than clean the house again only to find new spots that need further cleaning, they said fumigation would kill the spores completely. Hadler said the building poses no risk to anyone because it's now locked and sealed against public entry. Nor, he said, can the spores suddenly float away into the ozone -- they're more likely mixed with dust and remain secure in the carpets in the home. Hadler said it is likely one of the cutaneous anthrax cases in the family occurred because of contact with the spores inside the house.

Therefore, he said, it's possible in the future that others living in the house could become ill as well.

Hadler said it's possible that some activity -- cleaning the carpets, playing on the floor, doing repair work, or even demolishing the house -- could stir up those carpet-bound spores, allowing someone to breathe them in and become seriously ill. "So we have to ask: How much are we willing to pay to save a life?" Hadler said. "It's difficult because of the nature of anthrax spores. They can live in the environment for decades. We don't look at this as a modest job."

Byline: Robert Miller <bmillier@newstimes.com>]

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[3]

Date: 28 Sep 2007

Source: NewsTimesLive.com [edited]

<<http://www.newstimeslive.com/news/story.php?id=1186571937&category=News%20Local&keyword=anthrax&searchtype=AND>>

Crews to determine contaminants' disposal

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People driving by an anthrax-contaminated home on Padanaram Road in Danbury, CT, may see people working there over the next few weeks. The good news is people will be driving by.

For the moment, at least, the cleanup of the site will go into a minor key mode that won't involve routing traffic away from the house. "The road won't be closed down," Michael Nalipinski, the on-site coordinator for the federal Environmental Protection Agency (EPA), said Thursday [27 Sep 2007].

Instead, Nalipinski said, crews will be on the scene on and off over the next few weeks to do some basic cleanup tasks. They'll take samples from a barn behind the house to make sure it's free of anthrax spores. Crews will also be trying to figure out how to best dispose of the waste materials the previous work generated. That waste includes used decontamination suits and the chlorine-based solution used to wash the spores off walls and household objects. All that material is now stored in barrels at the site.

Nalipinski said Thursday [27 Sep 2007] the EPA and its partners in the cleanup -- the city and the state Department of Public Health and Department of Environmental Protection -- still haven't set a time line for cleaning the spores out of the house on the site. But he said the EPA's first choice for the work still remains fumigation -- building a big tent around the entire house, then pumping a gas into it that will kill all the spores.

The house and barn and the trunk of a car became contaminated with anthrax spores in August [2007] when a musician and African drum-maker purchased goat skins in New York City to fashion into drum heads. Unbeknownst to him, the skins, which came from West Africa, were infected with anthrax spores. Health officials learned of the situation early in September [2007] when the drum-maker and a family member came down with cutaneous anthrax -- a form of the disease that occurs when the spores get under the skin and the bacteria come alive. That caused a nickel-size, black-scabbed sore to break out on the man's arm, which doctors diagnosed as anthrax.

As soon as health officials learned of the anthrax contamination there, the family had to vacate and health officials sealed the home off from the public. The investigation of the

contamination and the first phase of the cleanup closed a section Padanaram Road for six days and cost several hundreds of thousands of dollars.

Byline: Robert Miller <bmiller@newstimes.com>]

[I delayed posting so that we could have some catch-up as events occurred. It is a slow process cleaning up such contaminated buildings, which is what we have seen before as in Florida. An interesting comment is that this drum maker bought the African goat skins in New York City. I wonder how many other people have been exposed from this primary source and what was done to limit contamination and possible infection damage. Maybe someone in the New York City Department of Health can elucidate on this. - Mod.MHJ]

#### ANTHRAX, BOVINE, EQUINE - NAMIBIA (OPUWO): REQUEST FOR INFORMATION

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 26 Sep 2007

Source: Namibian Broadcasting Corporation - News - Today's News [edited]

<<http://www.nbc.com.na/news/today.php?newsid=1041>>

Opuwo District Veterinarian Johannes Shoopala has confirmed an outbreak of anthrax at Honeb Post, 15 kilometres [9.3 miles] west of Sesfontein settlement. Dr. Shoopala told Nampa that 12 cattle and one donkey had already died.

Communicated by: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[We get regular reports of anthrax in the Caprivi strip and in the Etosha National Park but not so far west. Obviously there is more going on than gets reported.

To find Opuwo, go to:

<<http://www.fallingrain.com/world/WA/32/Opuwo.html>>

- Mod.MHJ]

#### ANTHRAX, HUMAN - MONGOLIA (KHOVSGOL)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Fri 28 Sep 2007

Source: People's Daily [edited]

<[http://news06.bjradio.com.cn/gj/200709/t20070928\\_501772.htm](http://news06.bjradio.com.cn/gj/200709/t20070928_501772.htm)>

Local media reports that a couple in Tunel in Mongolia's Khovsgol Province were determined to have contracted anthrax on 20 Sep 2007, and the county was closed off.

The infected couple underwent treatment at the province's infectious disease hospital.

The husband's condition improved, but the wife's illness worsened and she died on the 26 Sep 2007.

No further cases have been found.

[Byline: Wen Huo] Communicated by: ProMED-mail Rapporteur Dan Silver

[Anthrax is widespread and enzootic in Mongolia. In 2004, outbreaks were officially reported in the following 12 provinces: Khenti, Hovsgol, Bulgan, Selenge, Uws, Gobi-Altai, Ulaanbaatar, Darkhan-Uul, Ovorkhangai, Arkhangai, Drakhan-Uul, and Zavkhan.

Allowing for spelling variation during transliteration, anthrax is of some standing in Khovsgol/Hovsgol. Clarification of the situation has been requested of senior veterinary officers in Ulaan Baatar.

For Tunel, go to:

<<http://www.fallingrain.com/world/MG/13/Bulag.html>>.

- Mod.MHJ]

#### ANTHRAX, BOVINE - ARGENTINA (BUENOS AIRES)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 1 Oct 2007

From: Ramon Nosdeda <[rnoseda@laboratorioazul.com.ar](mailto:rnoseda@laboratorioazul.com.ar)>

I am sending you the following information for ProMED: "An anthrax outbreak took place in bovines (bulls) when a herd of 300 were grazing on corn stubble. This outbreak occurred during a drought (180 days with no rain). Approximately 15 days ago, it rained about 150 mm, and animals started to die, 5 to date. The herd has been vaccinated for almost 290 days. All the animals died suddenly, losing blood from their nostrils and anus. The animals were skinned (there are 3 people involved), and the veterinarians that made the necropsies saw splenomegaly, hemorrhagic enteritis and mesenteric adenitis. This farm had another outbreak 5 years ago. It is located in the Partido de Olavarria province of Buenos Aires, in the area known as Blanca Grande."

Dr Ramon Noseda

Laboratorio Azul Diagnostico SA

Av 25 de Mayo 479

(B7300FXE) Azul - Pcia Bs As - Argentina <<http://www.laboratorioazul.com.ar>>

<[rnoseda@laboratorioazul.com.ar](mailto:rnoseda@laboratorioazul.com.ar)>

[Thanks to Ramon for this report. Anthrax is an ongoing problem in Buenos Aires Province, and more so than in any other province in spite of an active program to control it. But the incidence is dropping slowly. It should be noted that this outbreak occurred after a drought broke. This is not unusual. The rain does 2 things: it softens the soil and encourages a rapid growth of forage, with the result that the hungry cows graze hard on this new growth and ingest soil, in this case contaminated. Thanks to the prolonged dry weather, their innate resistance will be down, and, therefore, the necessary infective dose of spores is reduced. Et voila! - Mod.MHJ]

#### ANTHRAX - ZIMBABWE (MAZOWE): REQUEST FOR INFORMATION

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 20 Oct 2007

Source: IOL [edited]

<[http://www.iol.co.za/index.php?set\\_id=1&click\\_id=84&art\\_id=nw20071020090944904C972938](http://www.iol.co.za/index.php?set_id=1&click_id=84&art_id=nw20071020090944904C972938)>

Seven people have been sent to hospital in Zimbabwe with potentially lethal anthrax poisoning following an outbreak of the animal-borne disease in a private game park north

of the capital, reports said on Sat 20 Oct 2007. The 7 have been admitted to hospital in the northern town of Concession, said the state-controlled Herald newspaper.

The outbreak of anthrax -- which is normally caught by humans if they eat the meat of infected cattle -- occurred at Manzou Game Park in Mazowe, said the paper.

There are sporadic outbreaks of anthrax in Zimbabwe. Last December [2006], 3 people died in Goromonzi district, east of the capital, from anthrax, which they were suspected to have caught after either eating or handling infected meat.

Communicated by: ProMED-mail <promed@promedmail.org>

["Poisoning" suggests gastro-enteric anthrax, but, knowing the inaccuracies implicit in newspaper reports, it could be either cutaneous or both. This disease is now widespread in Zimbabwe and enzootic. It has long been a disease of nature parks in Africa because of the problems inherent in controlling it in wildlife. That it is on a private park might exclude the possibility that it was initially in cattle brought without permission into the park by neighboring villagers, a constant problem in national parks throughout East Africa. Clarification is being sought from contacts in country. - Mod.MHJ]

#### ANTHRAX, HUMAN - UK (02): (SCOTLAND)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 26 Oct 2007

Source: BBC [edited]

<[http://news.bbc.co.uk/2/hi/uk\\_news/scotland/south\\_of\\_scotland/7063499.stm](http://news.bbc.co.uk/2/hi/uk_news/scotland/south_of_scotland/7063499.stm)>

An MSP has called for a fatal accident inquiry to be held into the death of a Borders man last year [2006] from anthrax. He was the 1st person to die in the UK from the disease in the past 30 years. The man, of Stobs, near Hawick, died in July last year. Tests later confirmed anthrax as the most likely cause of death. South of Scotland MSP Christine Grahame said an investigation into the case had taken too long and that an inquiry would be in the public interest. NHS Borders is to report on the case in December 2007 with a decision on whether to hold an inquiry due after that.

Ms Grahame has raised concerns with the solicitor general about how the incident was handled. She is particularly concerned about the length of time it took to confirm the cause of death. "The Crown Office is still to decide whether to bring a prosecution or proceed with an FAI, but from the evidence I have seen so far, I think the public interest would be best served by the latter," she said. "I understand further that Mr Norris did not contract the anthrax spores from a contaminated badger pelt, as has been reported, or from a drum that he had made himself." She said it appeared the anthrax came from an imported drum, which released the spores when it was being played and which were then directly inhaled by Mr Norris.

"I believe the authorities are confident that they have taken all necessary steps to trace all those who may have come into contact with that source and no other individuals have been contaminated," she added.

Communicated by: ProMED-mail <promed@promedmail.org>

[The Scottish MSP is correct in being concerned at the delays in diagnosing this case. I have long argued that it is largely a matter of chance whether human anthrax-systemic infections are correctly diagnosed. The cutaneous lesions shout out their identity even

when the true cause might be a staphylococcal infection. Little harm is done by this error, as a false positive results in various confirmatory actions. A false negative is buried and forgotten. - Mod.MHJ]

ANTHRAX, HUMAN, LIVESTOCK, WILDLIFE - KENYA: (SAMBURU)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 29 Oct 2007

Source: African Journal of Ecology 2007 Dec; 45(4): 483-9 [edited]

<<http://www.blackwell-synergy.com/doi/abs/10.1111/j.1365-2028.2007.00758.x>>

Anthrax outbreak among Grevy's zebra (*Equus grevyi*) in Samburu, Kenya. PK Muoria, P Muruthi, WK Kariuki, BA Hassan, D Mijeje, NO Oguge. African Journal of Ecology 2007; 45(4): 483-9.

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Abstract: An anthrax outbreak occurred in the Wamba area of southern Samburu, Kenya between December 2005 and March 2006. The outbreak affected equids including the endangered Grevy's zebras (*Equus grevyi*), plain zebras (*Equus Burchelli*), and donkeys (*Equus asinus*) [and camels]. Most of the deaths were localized in the Nkaroni area just west of Wamba town.

The diagnosis of anthrax was rapidly confirmed by bacteriological methods. The relevant government departments, including the Kenya Wildlife Service and Veterinary Department, and other stakeholders were promptly informed.

53 Grevy's zebra and 26 plains zebras died from anthrax. An equal number (18) of adult male and female Grevy's zebras succumbed to the disease [and 12 juvenile and infant Grevy's]. The outbreak affected immature and mature individuals equally. [sic: 36 adults vs. 12 younger?; and only 8, presumably adults, were confirmed through laboratory examination. Infant animals tend to die from starvation when their mothers die. The age categories and sexes of 5 carcasses could not be determined. - Mod.MHJ] The dead plain zebras included 15 adult females, 2 adult males and 9 immature individuals. The Veterinary Department responded by vaccinating livestock, while Kenya Wildlife Service vaccinated 620 Grevy's zebras within southern Samburu.

Examination of sites at which carcasses of animals that succumbed to the disease were burnt revealed that unsupervised burning did not eliminate anthrax spores in 42 percent of the cases (n=14). There is an urgent need to incorporate strategic wildlife disease monitoring in the struggle to save Grevy's zebras and other endangered species.

communicated by: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[The authors are to be congratulated on this paper and the hard work in the field that it represents. They recovered spores from 6/14 burn samples but none from the (14) soil and (4) water samples. As carcasses tend to wander after death thanks to scavengers, it is not surprising that the soil samples were negative.

Burning a carcass takes more skill than many appreciate, as it is necessary to get the carcass up off the ground so that air can get in underneath. Otherwise, it is a 3 day job if you are depending on wood piled on top. I have not infrequently found maggots happily feeding under a partially burnt carcass.

While zebras are subject to anthrax, they are not all that commonly afflicted in Africa if the literature is correct. I suspect that this is because they are primarily grassland grazers and not scrub and brush browsers like kudu, which seem to be the preferred target species in many African parks. From the published map, the distribution of this epidemic was determined by the zebras. The February 2006 reports had the authorities planning to vaccinate 1500 zebras, but 620 is still no mean feat and will have done some good.

The following is quoted from:

<[http://www.int.iol.co.za/index.php?set\\_id=1&click\\_id=3045&art\\_id=nw20070905231302283C550386](http://www.int.iol.co.za/index.php?set_id=1&click_id=3045&art_id=nw20070905231302283C550386)>:

"Fewer than 2000 Grevy's zebras are believed to live in the wild. About 1800 live near sprawling plains in and around Kenya's central Samburu National Reserve, about 230 km north of Nairobi, and the rest in southern Ethiopia. Conservationists say the Grevy's zebra population has decreased from 15 000 across the eastern Africa region in 1970 to less than 2000 that currently live only in arid habitats in northern Kenya and Ethiopia. In addition to those living in the wild in east Africa, about 220 Grevy's zebras are housed in zoos around the world.

"Poaching for meat and their valuable hide have decimated populations in Eritrea, Djibouti and western Somalia. While the zebras are prey for lions, cheetahs and hyenas, their population was hit hardest by hunting due to the demand in the fashion world for the animals' striking black-and-white hides."

The last statement should raise some caution flags for customs officials, as it is not at all impossible that a number of these Kenyan Grevy's may have been skinned after dying from anthrax, and their valuable and striking but contaminated hides will wend their way out of Africa into the rich international markets. - Mod.MHJ]

#### ANTHRAX, HUMAN, LIVESTOCK - INDONESIA: (EAST NUSA TENGGARA)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Tue 30 Oct 2007

Source: The Jakarta Post, Associated Press report [edited]

<<http://www.thejakartapost.com/detailgeneral.asp?fileid=20071030173349&iREC=0>>

Indonesia was distributing anthrax vaccines across a remote island on Tuesday [30 Oct 2007] after 10 villagers contracted the disease from an infected buffalo, an agriculture official said. Livestock movement in areas close to where the villagers lived on Flores Island in the far east of the country has also been banned, said Musni Suatmojo, director of animal health at the Agriculture Ministry.

The 10 villagers were diagnosed with the disease last week [22-28 Oct 2007], he said, adding that officials suspected they contracted it after cutting up and eating an infected buffalo. They were diagnosed as having cutaneous anthrax, the most common form, which enters through a cut or abrasion and can cause skin rashes and swelling, he said. They were treated with antibiotics and are now recovering, Suatmojo said.

The disease is endemic across much of Indonesia. Some 20 000 doses of livestock vaccine were being distributed across the island, Suatmojo said.

communicated by: ProMED-mail rapporteur Brent Barrett

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[2]

Date: Tue 30 Oct 2007

Source: Brisbane Times, Agence France-Presse (AFP) report [edited]

<<http://www.brisbanetimes.com.au/news/world/anthrax-scare-hits-indonesia/2007/10/30/1193618872197.html>>

An official said today [30 Oct 2007] that 3 villages in Indonesia's east have been closed off to outsiders after more than 750 people fell ill from eating anthrax-infected buffalo meat. "We've now recorded 761 people from 3 villages falling ill after eating buffalo meat infected with anthrax," said local official Cornelis Wara from Ende district, one of the affected areas on Flores Island.

A veterinary official, Maria Geong, said more teams had been sent to the district to locate and vaccinate livestock, reinforcing several sent at the weekend [27-28 Oct 2007] after 20 villagers were initially reported ill. "We have sent 20 000 doses of vaccine to the 3 villages and several areas in Ende district," she said, adding that another 20 000 doses had also been sent to adjacent Sikka district to contain the spread of the disease.

In April [2007], 5 people died after consuming infected beef on nearby Sumba Island. Health officials sealed off a number of villages there for several weeks to contain the disease. Flores and Sumba are in East Nusa Tenggara province, where anthrax is endemic. The province is 1500 km (932 mi) from Jakarta.

communicated by: ProMED-mail rapporteur Brent Barrett

[Anthrax is enzootic in Indonesia but sporadically reported, mostly in cattle but also in water buffalo, sheep and goats; human cases average some 20 a year -- most recently in West Sumatra, Jambi, DKI Jakarta, West Java, Central Java, West Nusa Tenggara, East Nusa Tenggara, South Sulawesi, Southeast Sulawesi, and Central Sulawesi.

In this instance there appears to be a mix of cutaneous cases and possible gastroenteric cases. Some of the latter 761 gastroenteric cases may not truly be anthrax. Clarification is sought from our Indonesian colleagues and we would especially appreciate laboratory confirmation of the diagnosis on the meat and the hospitalised human cases. - Mod.MHJ East Nusa Tenggara (Nusa Tenggara Timur) in the eastern portion of the Lesser Sunda Islands can be located on the map at

<<http://www.un.org/Depts/Cartographic/map/profile/indonesi.pdf>>. - CopyEd.MJ]

#### ANTHRAX, HUMAN, BOVINE - ZAMBIA (WESTERN PROVINCE)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 14 Nov 2007

Source: Xinhua [edited] <[http://news.xinhuanet.com/newscenter/2007-11/14/content\\_7075384.htm](http://news.xinhuanet.com/newscenter/2007-11/14/content_7075384.htm)>

Zambia Post reported on 14 Nov 2007 that 6 villagers in Mongu District in Zambia's Western Province were hospitalized after contracting anthrax from diseased beef.

Along with other measures, the local government has provided vaccines for domestic livestock and has urged local farmers not to panic, saying it will work exhaustively to control the disease. Local veterinary officials have advised residents not to eat meat from diseased carcasses.

The report says that Mongu District health agency has requested the central government to urgently dispatch 23 000 units of anthrax vaccine for vaccination of livestock in villages surrounding the area where anthrax was discovered to prevent a large scale outbreak.

[Byline: Jinhai Liu] Communicated by: ProMED-mail Rapporteur Dan Silver  
[Our thanks to Dan for finding and translating this report via China. Mongu in Western Zambia has long been enzootic for anthrax. And unfortunately, reactive livestock vaccination will do little to control this disease in the medium term, much less the long term. It is an area with poor roads and weak infrastructure, and therefore the District Veterinary Officers have problems responding to any reports of livestock problems, and especially acute problems. Thus, we see this situation, where response comes as a reaction to human cases. To cost-effectively control livestock anthrax, one must have a program of routine annual vaccination of at-risk herds and flocks. It is even more efficient if there is surveillance for unexpected livestock deaths so that they can be promptly investigated, whether due to poisonings, blackleg, or even anthrax. - Mod MHJ]

#### ANTHRAX, RABBIT - NEW MEXICO: ALBUQUERQUE

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 16 Nov 2007

Source: KDBC News & AP [edited]

<<http://www.kdbc.com/Global/story.asp?S=7374576>>

A team of epidemiologists and scientists are trying to determine how a laboratory rabbit used as part of a research project at the University of New Mexico was exposed to a wild strain of anthrax.

Sam Giammo is a spokesman for UNM's Health Sciences Center. He says the anthrax found in the rabbit occurs naturally in the soil in New Mexico and is not a public health threat.

The state Department of Health announced today [16 Nov 2007] that a tissue sample from the rabbit that died Monday [12 Nov 2007] tested positive for anthrax, which can be passed from animal to human [Wrong: Anthrax is essentially non-contagious. - Mod.MHJ]. Health officials say 2 employees who performed the necropsy were given antibiotics as a precaution.

Giammo says about 20 UNM lab workers also will be given antibiotics.

Communicated by:

ProMED-mail Rapporteur Brent Barrett

[This doesn't make sense on a number of levels. Laboratory animals should not be exposed to *Bacillus anthracis* except through purposeful and documented exposure. Then, it states that it came down with a "wild strain" occurring naturally in New Mexico without further definition. Does this mean that they are doing anthrax experiments and, upon genotyping the recovered isolate, it was not the "laboratory" strain it should have been? Or, are they carelessly using a mixed culture? If the rabbit isolate is "local," it is probably comparable to a recent outbreak in 1998 at Wagon Mound near the Colorado border involving cattle and horses; otherwise this disease has been infrequently reported in New Mexico during the past decade or so. Wagon Mound has mollic/steppe soils and

is thus suitable for spore survival, but this is not to say that they do have active cattle grave sites, though reading the 1997-98 reports below may certainly suggest it. Rabbits are fed hay as part of their routine diet, and it might be that this hay was contaminated with soil; hay may also be a component in their pelleted feed. If so, the UNM HSC should examine their purchasing habits, as such soil-contaminated hay is usually of obviously poor quality. And if "hay" is to blame, other hay from that field will have been sold elsewhere and may be causing livestock deaths as yet unreported. Clarification is being sought from various folk in New Mexico. - Mod.MHJ]

#### ANTHRAX, CATTLE GRAVES - RUSSIA (02): (IRKUTSK)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Mon 19 Nov 2007

Source: Regnum News Agency [in Russian, trans. Corr.ATS, edited]

<<http://www.regnum.ru/news/medicine/916110.html>>

The Irkutsk regional prosecutor's office initiated an inspection to monitor how the law is followed during the utilization or extermination of biological materials. All the animal burial grounds have been identified, including for anthrax-infected animals. According to the information given to IA Regnum on 15 Nov 2007 by Alexander Semenov, senior assistant to the prosecutor, 51 animal burial grounds and 15 biothermal [burning] pits have been found, which were dedicated for dead animals. Anthrax spores were detected in 21 sites, most of which were operating with serious violations of the established rules. According to sanitary veterinary regulations all biological waste should be either burned or buried at specific sites, and in exceptional cases buried in specifically designated areas. In reality, in almost every rural settlement and farm [there are no special places for the burial of biowaste resulting in the indiscriminate burial of dead animals.] And where special sites are available, sanitary and veterinary requirements are not met. The municipalities do not care much about the maintenance of these places and there are no funds allocated for it in budgets.

The prosecutor's inspection revealed that one of the causes of the current situation is weakened state control of the use of biological materials. The necessary legislative acts have not been developed to define the [separate] responsibilities of the federal veterinary services and regional services. Currently 2 bodies carry out veterinary regulation tasks, the Irkutsk veterinary service and the Regional Federal Veterinary and Phytosanitary Control Service. As Alexander Semenov mentioned, most of the time these agencies are busy with clarifying their mutual relations and as a result none of them is aware about the real situation, regular inspections are not carried out, and previous orders are not implemented.

The regional government and veterinary service have issued a report on the necessary measures to eliminate violations. In general, 120 reports have been issued for measures to be taken to follow veterinary regulations, 39 warnings have been issued for non-acceptable violations, and 9 lawsuits for administrative violations have been launched; 2 officials have been charged and 74 court decisions have been issued on accepting the actions of local government to follow veterinary regulations as inadequate.

Communicated by: ProMED-RUS <[promed@promedmail.org](mailto:promed@promedmail.org)>

[There are 2 key components in the control of livestock anthrax: (1) site control and disinfection, and proper disposal of the affected carcasses, preferably by burning; (2) regular vaccination. Together, these will cost effectively stop the disease and in time achieve eradication.

In the old Soviet days these sites were regularly checked for viable spores and most were soon spore free; some persisted but these were usually apathogenic as the plasmids were lost over time, usually within 5-8 years. Positive sites would be fenced off or concreted over. It has been clear for some time that there has been a collapse of the rural veterinary services in Russia and especially in Central Russia. Adequate funding does not percolate down to these individuals. Meanwhile the bureaucrats fire memoranda at each other and maneuver committees. 'Twas ever so and is a problem not unique to Russia. Let us hope that Alexander Semenov will be successful in getting our veterinary colleagues in Irkutsk to be actively monitoring the proper disposal of livestock carcasses, and that appropriate funding will be set-aside for this. There seems to be a move by the Russian oblast [province] authorities to investigate these sites; see below for other oblasts to the west of Irkutsk. - Mod MHJ

#### ANTHRAX, RABBIT - USA (02): (NEW MEXICO)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Thu 22 Nov 2007

From: ProMEDmail.org

Source: Albuquerque Tribune [edited]

<<http://www.abqtrib.com/news/2007/nov/19/no-anthrax-found-exposed-unm-labs/>>

No anthrax found in exposed UNM labs

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No anthrax was found in the rooms where a anthrax-positive research rabbit lived at the University of New Mexico, the State Department of Health said this morning [22 Nov 2007]. Swabs taken Friday [16 Nov 2007] from rooms exposed to the laboratory rabbit, exposed to a wild strain of anthrax, showed no traces of the bacteria, said department spokeswoman Deborah Busemeyer.

Still, 2 employees who had contact with the rabbit were given antibiotics that are used to treat infections caused by exposure to anthrax, which can be passed from animal to human.

About 20 UNM laboratory workers were also to be given antibiotics as a precaution, said Sam Giammo, a UNM Health Sciences Center spokesman.

Communicated by: ProMED-mail Rapporteur Brent Barrett

[We apologize for the late reporting of this event but Thanksgiving casts a long shadow. Environmental swabs would not be expected to show anything in a properly run laboratory animal facility; i.e., it would be clean. However one should note that this summer we tried out a commercial anthrax spore test kit in 4 US states and 3 Canadian provinces and it totally failed to come up with a single positive in situations where B. anthracis was demonstrated by the US Navy field ELISA test kit and by culture. So until more details are made available as to how this facility was tested, we can only take their results on face value. Other enquiries have revealed that the 2 veterinarians given

antibiotics were from the NM Dept of Agriculture diagnostic laboratory. Bureaucratic caution might recommend treating these 2, though proper necropsy protocols would prevent any real exposure, but the reasons for treating the 20 other staff evade me at this time. The nature of the forensic and epidemiologic investigations into this event are awaited. - Mod.MHJ]

#### ANTHRAX, BOVINE - ISRAEL

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Sun 25 Nov 2007

From: Daniel Elad <[danielad@moag.gov.il](mailto:danielad@moag.gov.il)>

On Mon 19 Nov 2007, 2 heifers out of a herd of 120 cows grazing on a lot in the Lachish area died. The spleen of one of them was submitted to the Dept. of Clinical Bacteriology and Mycology at the Kimron Veterinary Institute, and *Bacillus anthracis* was isolated from it. The carcasses of both heifers were burnt and buried. An additional heifer died on 20 Nov 2007, and again *B. anthracis* was isolated from its ear. Identification was made by morphological and biological characteristics and PCR.

Since the Lachish region, located in the center-south of Israel, is endemic for anthrax (see ProMED post 20040714.1893), the herd was vaccinated (about 6 months ago). The last outbreak was in 2004, and a single case was diagnosed in 2005 in the same herd. The herd currently involved grazed in a different area on higher ground than the one affected in 2004 and 2005, which had grazed in the riverbed.

Following the new cases, the herd was revaccinated on 21 Nov 2007 and moved to another pasture. No further cases were observed by 25 Nov 2007.

Daniel Elad, DVM, PhD Head, Division of Bacteriological and Mycological Laboratories The Kimron Veterinary Institute Bet Dagan, Israel <[danielad@moag.gov.il](mailto:danielad@moag.gov.il)>

[Our heartfelt thanks to Daniel for this prompt and valuable report. The repeated outbreaks in this herd are a bit of a puzzler as was its 1st outbreak in 2004. It is worrying that vaccination does not appear to be protecting this herd as well as it should. We have seen similar late season outbreaks in Central Asia, but those involve trailing cattle back from high summer grazing along traditional cattle trails. One can speculate from a distance, but we must await the results of the experts on the ground. - Mod.MHJ]

#### ANTHRAX, LIVESTOCK - ITALY: (VENETO)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Tue 4 Dec 2007

From: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

B1 outbreak in Belluno

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[I am reliably informed by Antonio Fasanella, Istituto Zooprofilattico Sperimentale (IZS) della Puglia e Basilicata, and Michela Corro, IZS Padua, that in late October (2007) there was at least one outbreak of anthrax affecting livestock near Belluno (Veneto). Briefly, the outbreak involved one 2 1/2-year-old Simmental cow that had just returned to the

farm on 20 Oct 2007 from the summer pastures in the mountains some 20 km (12.5 mi) away. She died on 23 Oct 2007 having suffered a 39 deg C (102.2 deg F) fever, rumination block, tachycardia, and difficult breathing. She was diagnosed with anthrax. This summer pasture is known to be a 'champs maudit' but the last known outbreak was more than 20 years ago. The 20-cow herd had been vaccinated annually but this was dropped 5-6 years ago. The herd had been supplementally fed with the farm's own hay. The interesting aspect of this outbreak -- other than it is in Northern Italy where anthrax is frankly rarely reported these days -- is that it involved the B1 genotype. B1 is essentially limited to southern Africa, so far as we know. In our global collection and related studies we have come up with only 6 B1 isolates from outside Africa: from California (Santa Clara, 2001), North Carolina (1939), Germany, Norway (Oppland, 1976), and 2 from the UK (outbreak associated with a Spanish mineral mix, 1972; multiple outbreaks associated with "Senegalese" groundnut meal, 1978). In December 2005/January 2006 there was a B1 outbreak on an isolated farm in the Parcines commune in the Alto Adige region (Bolzano) in housed stock; see ProMED-mail 20060127.0265. This farm at 1500 m (4921 ft) altitude is reached by a private funicular railway or by a seasonal dirt track. A cow and calf died as well as 4 goats and a sheep. All had gross pathological signs typical of anthrax. The latter sheep was submitted for laboratory analysis at IZS Bolzano and *Bacillus anthracis* was isolated. The farmer developed a skin infection subsequent to butchering some of the affected animals. This farm has a 10 has. (24.7 acres) hay pasture but had bought hay, of which 95 percent came from specific farms in Belluno; it had been fed to the cattle since the previous October (about 9 weeks) and to the goats and sheep since the mid-November (about 5 weeks). The Parcines farm is some 200 km (125 mi) from Belluno with a number of mountain ranges in between; check it out on Google Earth ... an area one goes around. So while the B1 strains in the Kruger National Park need alkaline soils [KL Smith, V De Vos, H Bryden, L Price, M Hugh-Jones, & P Keim. 2000: *Bacillus anthracis* diversity in Kruger National Park. *Journal of Clinical Microbiology* 38(10):3780-3784] and are less flexible in this than the A strains, it would seem that once established elsewhere in an appropriate soil they can cause problems over an extended period. One or more of such sites may be in the Belluno region. Various aspects of this latest Belluno outbreak are under investigation and we await their results with interest. - Mod. MHJ]

#### ANTHRAX, BOVINE - KAZAKHSTAN: (WEST KAZAKHSTAN)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: Fri 7 Dec 2007

Source: Vzglyad Business newspaper, Itar-Tass report [in Russian, trans. Mod.NR, edited] <<http://www.vz.ru/news/2007/12/7/130110.html>>

The Ministry of Emergencies of Kazakhstan has reported that the head of the West Kazakhstan oblast has announced a quarantine because of a case of anthrax in Zhimpity village in the Syrymsky district. The report states that only one sick cow has been registered; the body has been burned and buried.

A total of 8 groups of specialists consisting of veterinarians and 2 assisting staff implement vaccination in the surroundings. 2 observation posts equipped with disinfection barriers have been established for surveillance. An investigation has started in the farmstead where the sick cow [died] and the place was disinfected.

Communicated by: ProMED-RUS <promed@promedmail.org>

[Comments of Mod.NR. The last outbreak of anthrax in this country was registered in the South Kazakhstan region in October 2006. 9 people were identified with anthrax. The sources of these sporadic cases are hundreds of animal burial grounds spread over country. - Mod.NR

While most outbreaks of anthrax in Kazakhstan are in the oblasts along its southern border there are occasional outbreaks in the western oblasts. While persistent contaminated "foci" are high in one's suspicions for this country, the actual causes remain unclear. It is more likely to be deficient control procedures, including a poor vaccination policy. Interestingly, we have had reports of anthrax from this district before; see ProMED-mail 20060721.1998. There have been other reports posted on outbreaks in this oblast.

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[2]

Date: Sat 8 Dec 2007 16:10:11 -0800 (PST)

Source: Capital Trends [edited]

<http://capital.trendaz.com/index.shtml?show=news&newsid=1091126&lang=EN>

The facts of infection of livestock with anthrax in Kazakhstan do not present threats to Azerbaijan due to absence of meat import from this country, a source stated in the State Veterinary Service of Azerbaijan's Agriculture ministry. "We do not have such co-operation with Kazakhstan and therefore, it presents no threats," the same source stated. The State Service reported that as a rule, the [bacteria causing] this disease live in a soil environment and there are several centers of this disease in Azerbaijan, particularly in the districts of Barda, Shamkir, near Mingachevir. Annually vaccination is held in all regions to prevent the spread of this disease amongst livestock.

"Currently the epizootic situation in Azerbaijan is being assessed as neutral," the same source reported.

Kazakhstan's Ministry of Emergency Situations reported that the facts of infection of livestock with anthrax were registered in Western-Kazakh region. The Ministry stated that quarantine has been announced in Jimpiti Sirimski village of Western-Kazakh region due to the spread of anthrax.

[Byline: S. Babayeva]

Communicated by: ProMED-mail Rapporteur Brent Barrett

[West Kazakhstan oblast (province) does not border on the Caspian Sea, which reduces the likelihood of shipments reaching Baku. Logically Volgograd, Saratov, and Samara in adjoining south-central Russia are more at risk as they are significantly nearer this Kazakh oblast. - Mod.MHJ]

**ANTHRAX, CATTLE GRAVES - RUSSIA (NIZHNY NOVGOROD), KYRGYSTAN**

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A ProMED-mail post <<http://www.promedmail.org>>

[1] Anthrax, cattle graves - Russia (Nizhny Novgorod) [2] Anthrax, cattle graves - Kyrgyzstan

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[1] Anthrax, cattle graves - Russia (Nizhny Novgorod)

Date: Fri 21 Dec 2007

Source: IA Regnum [translated by ProMED RUS Corr. BA, edited]

<<http://www.regnum.ru/news/fd-volga/nnovgorod/935738.html>>

The program on safety of anthracic entombments in Nizhny Novgorod is half completed

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The regional purpose-oriented program "Safety maintenance of anthracic entombment in Nizhny Novgorod region" in 2007 is half completed.

There are objective reasons for incompleteness. One of these reasons is the absence of information on the locations of anthrax cattle graves. An objective of the program is to provide safety of 232 anthracic cattle graves. It is offered to significantly solve this problem -- by means of conservation of the anthracic cattle graves. Conservation technology of cattle graves means constructing concrete sarcophagi. According to archival data since 1888 for the Nizhniy Novgorod region 22 282 animals with anthrax were registered in 2080 settlements.

Communicated by: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[Tragically my good friend and colleague Benyamin Cherkasskiy died earlier this year of lung cancer. He had constructed a 100 year 'cadaster' of anthrax outbreaks in the old Soviet Union and was a valued reference for what had happened when and where. Many anthrax cattle gaves were routinely checked annually under the old system, and if positive most ceased to display any spores within a few years. The routine system for dealing with them was to lay down a concrete slab over the grave. Inelegant but effective. - Mod.MHJ]

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[2] Anthrax, cattle graves - Kyrgyzstan

Date: Wed 19 Dec 2007

Source: Press.uz.info [translated by ProMED RUS Corr. BA, edited] <<http://www.press-uz.info/index.php?title=home&nid=2714&my=122007>>

1180 anthrax pestholes were registered in Kyrgyzstan

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1180 anthrax pestholes [foci] were registered in Kyrgyzstan. In 2007, 1 028 500 cattle, 2 408 000 sheep and goats, 202 400 horses and 17 200 pigs were vaccinated against anthrax.

The main reason of anthrax is serious infringement of veterinary and sanitary regulations by owners of animals during slaughtering and realization of slaughter products.

Communicated by: ProMED-mail <[promed@promedmail.org](mailto:promed@promedmail.org)>

[Unfavorable situation with anthrax cattle graves in Russia (Nizhny Novgorod, Udmurtia, Mary El, Karelia, Irkutsk region) may result in animal and human anthrax.

A complicated situation with cattle graves has developed in Kyrgyzstan where tens of human and animal anthrax cases are annually registered. All agricultural animals are subject to obligatory vaccination against anthrax. However some owners of animals evade vaccination and that may lead to an increased risk of infection and promote pathogen circulation in the environment. - Mod.NP]

[The 1180 'pestholes' noted above is the historic number of known and registered sites, not the cases in 2007. The true situation in Kyrgyzstan may not be as good as these vaccination numbers might indicate. Funds trickle down from the top and thus rural veterinary offices are seldom supplied with enough money for gasoline to travel out to their local farms and villages, much less having vehicles. This results in a paucity of rural veterinarians. So these vaccination numbers probably refer to doses purchased centrally. In addition, the traditional livestock handling procedure is for a community hired minder to collect up the village livestock in the morning and walk them out to the grazing area. If an animal sickens during the day, it will have its throat cut, and the carcass is skinned and butchered. The pieces are then wrapped in the hide and delivered to the owner when the animals return to the village and handed over to their owners in the evening. This traditional system of management is common throughout Central Asia, those parts of Russia, parts of eastern Turkey and even in parts of Italy. The result is that there is significant soil contamination and a real risk of ongoing anthrax outbreaks. Also retrospectively locating these foci is not without problems. Attempts at fencing them off frequently result in the barbed wire being stolen. The only way of managing this situation is by rigorous annual vaccination, and when the incidence eventually drops away having a proactive surveillance system, site management, and laboratory confirmation. Not complicated when there is adequate funding at the field level and a functional infrastructure. The real world is frequently different. - Mod.MHJ]

#### ANTHRAX, HUMAN, LIVESTOCK - TOGO (NORTH)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Wed 26 Dec 2007

Source: Xinhua [edited]

<<http://news.qq.com/a/20071222/001326.htm>>

Anthrax Causes 6 Deaths in Togo

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The Ministry of Agriculture, Livestock and Fisheries announced recently that anthrax has occurred in the country's north, and 6 people have already died. The announcement said that anthrax appeared in cows and other livestock in early December [2007] in the country's northern plains region, and that 6 people had died from eating diseased beef. Others have also been infected and are undergoing treatment in hospital. Togo's government has sent medical teams to the affected area[s] and announced the preventive vaccination of cows and other measures. Agencies in Togo have warned residents to maintain alert and avoid eating beef from dead or diseased livestock.

[Byline: Li Benzhong]

Communicated by: ProMED-mail Rapporteur Dan Silver

[We greatly appreciate Dan translating this report and submitting it to us.

Anthrax is regularly seen in cattle and sometimes reported in sheep and goats in Togo, along with human cases. This is because there are 'champs maudit' in the regions of Savanes and Kara, and control is inconstant. In spite of the high risk of this disease in Togo, this is our 1st report. - Mod.MHJ]

ANTHRAX, BOVINE - AUSTRALIA (NEW SOUTH WALES)

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A ProMED-mail post <<http://www.promedmail.org>>

[1]

Date: 26 Dec 2007

Source: Australian Broadcasting Company News [edited]

<<http://www.abc.net.au/news/stories/2007/12/26/2127343.htm>>

DPI vaccinates cattle stocks after anthrax deaths

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The Department of Primary Industries is vaccinating cattle on an Upper Hunter property after the death of 5 head of stock from anthrax. It is not known how the outbreak on the Rouchel property, near Scone began. The department says it is not unusual to get a few outbreaks of the disease each year.

Communicated by: ProMED-mail Rapporteur Brent Barrett

[To find Scone, which is north of Sidney, go to the ABC link and click on their map link "Rouchel 2336." Their "tags" provide useful parallel information. Otherwise go to:

<<http://www.fallingrain.com/world/AS/2/Scone.html>> - Mod MHJ]

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[2]

Date: 27 Dec 2007

Source: ABC News [edited]

<<http://www.abc.net.au/news/stories/2007/12/27/2127798.htm>>

New anthrax outbreak hits Upper Hunter

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The New South Wales Department of Primary Industries says while anthrax has now spread to 3 properties near Scone in the Upper Hunter, the situation is under control. A total of 5 head of cattle have died on one property at Rouchel. Cattle on 4 other properties have been vaccinated. DPI spokesman Brett Fifield says they have been working closely with the property owners and the disease is being contained. "We've been monitoring the situation and vaccination is underway on 4 neighbouring properties," he said. "Following that we have detected anthrax on 2 neighbouring properties to the original site, but we believe we have the disease contained using vaccine. Cooperation has been flowing with the owners of the properties. At this stage it is a routine response and we are watching the situation very closely."

He says the outbreak in Scone is a surprise. "We do have an anthrax belt in New South Wales and this incident in Scone is nowhere near that belt, so we are looking at how this came to be," he said. "The DPI is confident we have the situation under control."

Communicated by: ProMED-mail Rapporteur Brent Barrett

[A quick check on the temperatures in NSW show that it is in fact not stressful, around 20 degrees C (68 degrees F), with the dew point in the same range. See:

<<http://www.wunderground.com/global/Region/AU/Temperature.html>>

Brett Fifield is correct in saying that these outbreaks are in a "new" area for NSW. We look forward to hearing the results of their investigations.

"New" outbreaks can be from various causes ... in winter it is usually due to imported contaminated feed or hay. But it is now mid-summer in NSW and thus in the middle of

the usual 'Anthrax Season' so that hypothesis is out of line. Memories being what they are and the turnover of farm ownership, remembrance of old outbreaks is soon lost and at the best of times it is not very reliable. However the infecting spores had to come from somewhere and they don't have legs. Scone is in a valley system and therefore one can suspect a washout of an old cattle grave upstream on another farm. On the other hand when this disease is truly sporadic and without consistency the causes are then from soil movements in relation to old graves, e.g., bulldozing when road making, clearly ditches and springs, cutting trenches for new water troughs in pastures, brush clearing and discing overgrown pastures.

If the noted 'spread' is real, and I have no reason to doubt their observations, it could be explained by tabanid ('horseflies') and it is notable that 5 head have died of anthrax on the index property. In our experience this is an adequate loading number to initiate effective fly spread to neighbouring herds. If interested, look up what happened in Saskatchewan in 2006, and in North and South Dakota in 2005. Same situation. The NSW authorities would be wise to have all herds with a 5-10 kms (3.1-6.2 mile) radius of the index herd on the alert for new cases. Female tabanids can fly 8 kms (5 miles) without trying as they potter about looking for the next animal to snack on. - Mod.MHJ]

#### ANTHRAX, BOVINE - ROMANIA (SUCEAVA): OIE

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A ProMED-mail post <<http://www.promedmail.org>>

Date: Fri 28 Dec 2007

Source: OIE (World Organisation for Animal Health) [edited] <[http://www.oie.int/wahid-prod/reports/en\\_imm\\_0000006628\\_20071227\\_151700.pdf](http://www.oie.int/wahid-prod/reports/en_imm_0000006628_20071227_151700.pdf)>

A cow and a calf affected in a small family herd in Stroiesti, starting on 6 Dec 2007 and confirmed on 17 Dec 2007 by the County Sanitary Veterinary Laboratory in Suceava; reported to OIE on 27 Dec 2007. The other animals in the herd have been vaccinated. At this time the source of infection is unknown.

The last reported case of anthrax was in 2006.

[To find Suceava, in northeastern Romania, go to

<<http://www.fallingrain.com/world/RO/34/Suceava.html>>. A map of the country is available at <<http://www.un.org/Depts/Cartographic/map/profile/romania.pdf>>.

Anthrax is sporadic in Romania and while it has been reported in the full range of susceptible livestock, reports are now only of cases in cattle, thanks to a vigorous cross-species vaccination programme. From 2001 to 2005 there were 8, 5, 2, 6, and 3 cattle outbreaks reported to OIE; data for 2006 is missing.

Anthrax in calves is unusual. I would expect that it probably died of starvation when its mother died, compounded by not having been isolated from her mother's carcass in an inadequate stable.

Considering the winter climate in northern Romania it may be presumed that this cow was infected as a result of contaminated feed, probably hay. If it were from a commercial feed supplement we can expect further cases. - Mod MHJ]

#### ANTHRAX, BOVINE - AUSTRALIA (NEW SOUTH WALES) (02)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 29 Dec 2007

Source: Australian Broadcasting Corporation [edited]

<<http://www.abc.net.au/news/stories/2007/12/28/2128409.htm>>

Anthrax spreads in Upper Hunter

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The Department of Primary Industries (DPI) says while the number of confirmed deaths of cattle in the Upper Hunter from an anthrax outbreak is 12, up to 20 animals are believed to have died. The disease has now spread to 5 properties after the initial outbreak on a farm at Rouchel, near Scone [That is 2 new outbreaks since the previous report. - Mod.MHJ]. All nearby stock are being vaccinated and the dead animals are being burned to stop the disease moving further.

DPI's deputy chief vet Ian Roth says investigations into how the outbreak occurred are continuing. "We've confirmed it in about 12 animals, that's in the lab but there are more animals that have died on these properties," he said. "It's a little bit hard to get the precise numbers because animals do die from other conditions in the paddock. Certainly on some of the properties there have been more than we have confirmed it in.

The DPI's Brett Fifield says vaccinations are working and it is unlikely the disease will spread further. "The situation in Scone is stable; there have been minor mortalities of cattle, the mortalities have stopped and a vaccination campaign is underway and we'll stem the spread of the disease," he said.

Communicated by: ProMED-mail Rapporteur Brent Barrett

[When tabanid flies are involved in spreading this disease it is wise to vaccinate neighbouring stock out 5-10 kms (3.1-6.2 miles) from the index outbreak. Female horseflies can amble out to 8 kms (5 miles) without straining themselves while snacking on the occasional cow. While this normally results in one or 2 cases per newly affected farm, if the owner is not aware of the risk and ignores these deaths, subsequent multiple deaths can act as a staging post for more contaminated flies to leapfrog the disease further out. Vaccination essentially kicks in on Day 8 post vaccination.

While Ian Roth is correct about cattle dying from many more common causes other than anthrax, it is wise in an outbreak situation to use the Scottish foot-test and presume that any unexpected death is, in this case, anthrax until evidence is available to indicate another cause. Usually these other deaths are from clostridial infections, which the farmer should have been preventing by routine annual vaccination anyway. - Mod.MHJ]

ANTHRAX, BOVINE - AUSTRALIA (03): (NEW SOUTH WALES)

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A ProMED-mail post <<http://www.promedmail.org>>

From: Mon 31 Dec 2007

Source: Australian Broadcasting Corporation (ABC) Rural [edited]

<<http://www.abc.net.au/rural/news/content/2007/s2129373.htm>>

An anthrax outbreak in the Upper Hunter Valley of New South Wales has claimed more than 30 head of cattle and a horse, and appears to be getting worse. Over the weekend [29-30 Dec 2007] 3 more deaths were reported, with the outbreak now spreading to 9

properties [4 more outbreaks since the last report. - Mod.MHJ] All have been locked down for 41 days.

The Department of Primary Industries does expect the number of deaths to stabilise, with many local cattle now vaccinated. Keith Miles has lost 22 cattle, and is hoping the vaccinations kick in soon. "We're just hoping to stem the deaths," he says. "To go out this morning and find another 3 head dead and they have to be burned, and that's the hard part of this, you spend your time vaccinating and then you go out the rest of the day burning carcasses and it's not just a matter of going out and setting fire to it, it takes about 3 days of burning because you have to get rid of the bones to ash."

Communicated by: ProMED-mail Rapporteur Brent Barrett

[If there have been 22 cases on one station (farm), there is going to be significant fly spread. I hope that they are vaccinating on a generous radius from affected herds.

Done correctly cows can be burnt in one day, not 3. The trick is to get them up off the ground so that there is airflow underneath. This can be done by trenching or raising the carcass using green timber; some people have been successful placing the carcass on a couple of hay bales (the circular variety) with some timber and diesel. Burning from the top down is hard work and routinely takes 3 days using wood or old tires. - Mod.MHJ]

#### ANTHRAX, BOVINE - AUSTRALIA (04): (NEW SOUTH WALES)

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A ProMED-mail post <<http://www.promedmail.org>>

Date: 31 Dec 2007

Source: The Australian News [edited]

<<http://www.theaustralian.news.com.au/story/0,25197,22990979-5006784,00.html>>

Another 3 head of cattle have died of anthrax in NSW's Upper Hunter region, but authorities are still confident the outbreak is under control. The Department of Primary Industries (DPI) says the deaths were on one of 8 properties already under quarantine at Rouchel, near Scone, and followed 2 days without any stock losses. There have now been 35 anthrax related cattle deaths. "We went for 48 hours without a single mortality, and then recently we've had 3 deaths on one property," DPI spokesman Brett Fifield told AAP. "[But] we fully expect that we will see a plateauing off of mortality. When it comes to the disease control, the deaths slow down and become infrequent and not as many in number, and that's what we've seen at Scone." Mr Fifield said the cattle were found today [31 Dec 2007], and cattle infected with the anthrax bacteria died very quickly.

The DPI remained confident the outbreak had been contained. "Other properties nearby may come up, but as long as we keep it at a nearby location, we'll be happy," Mr Fifield said.

The 8 quarantined properties range from large holdings with up to 500 head of stock to smaller farms with less than 30.

The outbreak is thought to be a result of driving rain which hit the region earlier this month [December 2007], exposing naturally occurring anthrax spores, which can remain dormant in the soil for decades.

According to the DPI, NSW experiences between 4 and 6 anthrax outbreaks a year, however they usually occur in a known "anthrax belt" in the state's west.

Communicated by: ProMED-mail Rapporteur Brent Barrett

[The last Australian report, also dated 31 Dec 2007, had 9 properties affected. The present total of 8 is either a journalistic error, or one or more deaths on investigation turned out to be something else, not anthrax. Both happen.

Ascribing this series of outbreaks to "driving rain" exposing viable spores raises the question that, if this disease is in a new area, do they have any evidence to confirm that past unreported/unrecorded outbreaks have occurred on the index farm, and, if so, when? One should remember that if every historic anthrax-cattle grave contained viable spores, we would be vaccinating virtually every cow in every country every year because of the cumulative incidence of this disease worldwide. But the reality is very much the reverse. Spore positive graves are the exception not the rule. If there is the interest, it is worth soil sampling any known grave sites on this farm.

It is always useful to do genomic analyses with any anthrax outbreak but especially when in "new" areas. It makes tracing very much easier. In the past, Australia obtained bone meal from Tanganika/Tanzania and India, and the recent outbreaks in Victoria and Queensland, etc., have been genetically typed.

Rain exposing spores is easier said than being a confirmed and reliable explanation, and is often invoked when hard data is absent and only speculation is available. There is a long history of rain being followed by anthrax outbreaks. But the actual mechanism(s) involved remain obscure. Some years ago, we investigated a series of 5 deaths in different pastures on one ranch in Coahila [Mexico]. This ranch had a history of the disease. During the summer, these pastures had had mesquite scrub bull-dozed to allow more grass to grow. But that was in a drought, and no grass grew until rains began again to fall in October, soon followed by these 5 deaths. We hypothesized that the scrub clearing tore up the soil, exposing spores, which were then included in the new grass root mat when the grazing responded to the rains. There had been a similar situation in southern Manitoba-northern Minnesota [USA] when the local ranchers disc-ploughed some overgrown weed-choked pastures.

While I am sympathetic to explanations involving "washouts" of old cattle graves and soil deposition on meadows downstream, similar to what happened in Victoria in '93, the commonest event is earth moving with heavy equipment, as in trenching, bull-dozing, ditch clearing, and clearing clogged waterways downstream of tanneries and mills. - Mod.MHJ]