Glanders
Büyükada Island

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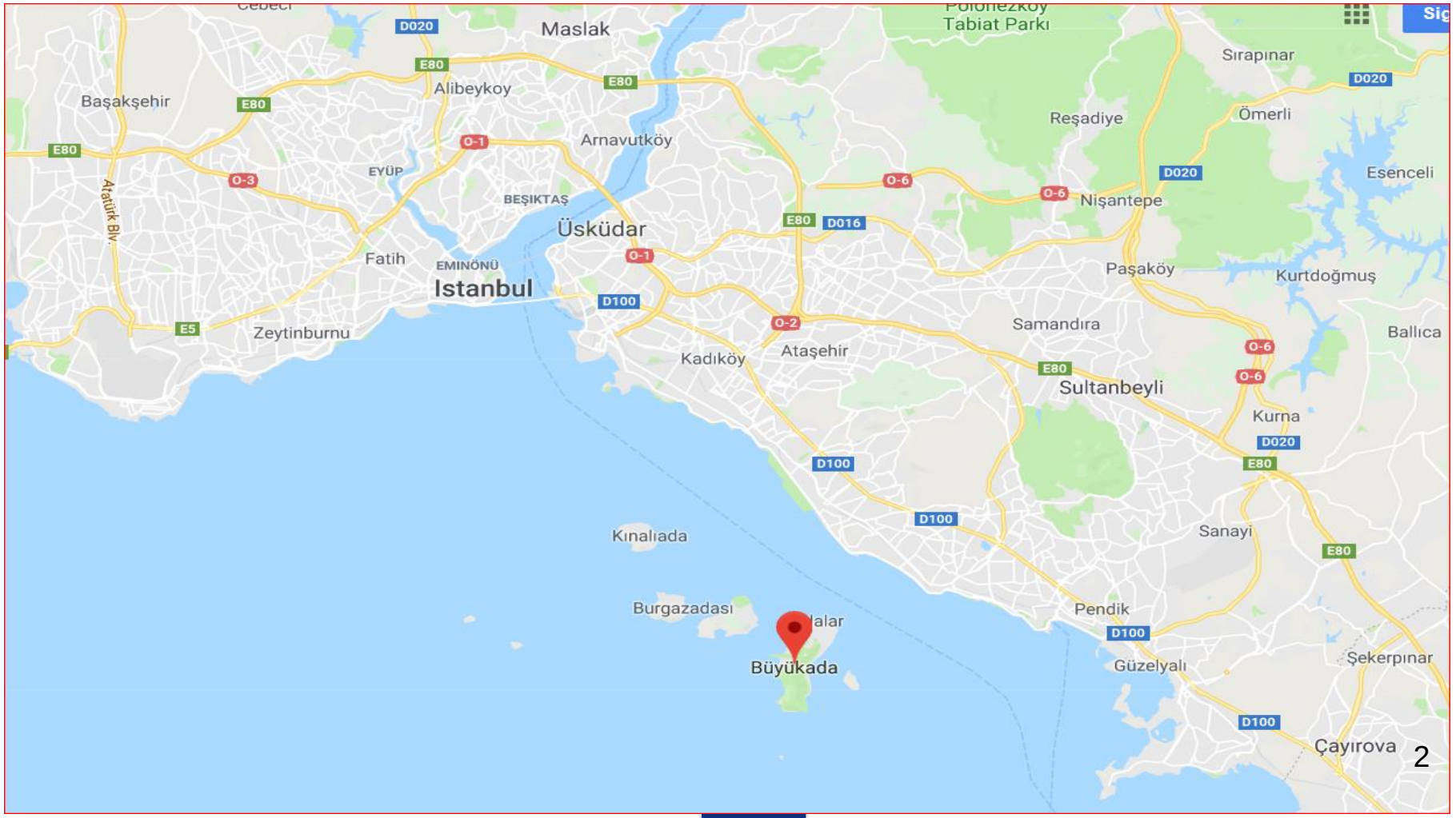

Glanders on Princes' Islands in 1999

Equine glanders in Turkey

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In the course of an epidemiological study of glanders on a number of Turkish islands in the Sea of Marmara, 1128 horses were examined by using the intracutaneous mallein test. Thirty-five (3·1 per cent) developed an increase in rectal temperature and a swelling at the point of injection. Ten of these horses were killed and glanders was confirmed in five cases by the presence of lesions and by the immunohistological demonstration of the causative agent, *Burkholderia mallei*. Clinical and pathological findings indicated that in all cases the infection was restricted to the mucous membrane of the nasal cavity with its parasinus, the nostrils and the upper lips. It was confirmed that equine glanders is endemic in Turkey.

GLANDERS is one of the oldest documented plagues among solipeds (Löffler 1886). It is caused by *Burkholderia mallei*, formerly known as *Pseudomonas mallei* (Yabuuchi and others 1992). Various clinical syndromes have been described in the literature (Knight 1972, Mayer 1981, Weiss and Rudolph 1988). Pneumonia, often in combination with a purulent nasal discharge and poor condition, is considered to be typical of the infection of the lungs. The cutaneous disease – also known as farcy – is characterised by nodules which develop into crater-shaped ulcers. The skin, the subcutaneous tissue and the lymph nodes are affected. Sometimes the lymphatic vessels draining the nodules are swollen so that they resemble a subcutaneous 'worm'. Glanders of the nasal and pharyngeal region is characterised by small nodules developing into ulcers. As the result of chronic inflammation and necrosis, ulcers with sharp margins, so-called lenticular ulcers, develop. Inflammation and healing can occur simultaneously, and typical stellate scars which resemble frost patterns are formed. The histopathological lesion typical of all glanderous lesions in different organs is believed to be an accumulation of necrotic cells with karyorrhectic nuclei. In horses, glanders has been reported to be a chronic disease, whereas in donkeys and mules it is usually an acute disease.

There are no modern descriptions of the clinical signs of this disease and the concomitant pathological changes.

In Western Europe glanders has been eliminated by using the mallein test as a screening test and culling the animals which are confirmed to be glanderous by the agglutidiameter after 72 hours was considered to be a positive reaction, in accordance with the veterinary regulations of the Turkish Ministry of Agriculture.

Animals

In line with veterinary regulations in Turkey, a control programme is being applied to the whole country. It includes quarantine measures and movement controls inside the country, the application of the intracutaneous mallein test, and slaughter of confirmed cases. The investigation took place on some small islands in the Sea of Marmara, near Istanbul. On these islands, motor driven vehicles are prohibited to protect the environment. The transport of man and goods is therefore limited to horses. In the summer tourist season, many horses are brought to the islands from all parts of Turkey but mostly from eastern Anatolia. Most of them are kept under extremely crowded conditions. In total, 1128 horses of both sexes were screened for glanders. Of the 35 horses showing a reaction, six female and four male animals aged seven to 10 years were euthanased for further investigation.

Pathology

The necropsies were carried out according to standard international protocols. Tissue samples were taken from the mucous membrane of the nasal cavity (septum and conchae), the lungs, the liver, the spleen and the kidneys; they were fixed at room temperature in 10 per cent buffered formalin for at least 24 hours. Samples were embedded in glycolmethacrylate

Veterinary Record (1999) **144,** 255-258

Information

Glanders,
Turkey

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Information received on 12/12/2017 from Dr Nihat Pakdil, Deputy Undersecretary of Ministry, Vetrinary Services, Ministry of Food, Agriculture and Livestock, ANKARA, Turkey

Summary

Report type	Immediate notification (Final report)
Date of start of the event	13/10/2017
Date of confirmation of the event	13/10/2017
Report date	12/12/2017
Date submitted to OIE	12/12/2017
Date event resolved	08/11/2017
Reason for notification	Recurrence of a listed disease
Date of previous occurrence	09/2001
Manifestation of disease	Sub-clinical infection
Causal agent	Burkholderia mallei
Nature of diagnosis	Laboratory (basic)
This event pertains to	a defined zone within the country

2017 Temporary admission

For import or admission (info)	Temporary admission horses												
Sum of Total Number of animals (cveda)	Column Labels												
Row Labels	January	February	March	April	May	June	July	August	September	October	November	December	Grand Total
Algeria										1			1
Argentina	48	35	13	11	7	9	15	6	36	24	15	99	318
Australia			22	6		3	5					3	39
Bahrain										2			2
Belarus	5	13	4	18	14	16	21	12	8	25	6	15	157
Canada					13	6	98	4	6		3		130
Chile	1		5				1	9			1	15	32
Japan								2			1		3
Jordan								3			2		5
Macedonia, The Former Yugoslav Republic Of			1					1					2
Malaysia					2								2
Morocco		30	15	6		14		6					71
Oman				1									1
Russian Federation	19	19	45	23	48	75	61	32	17	57	10	11	417
Serbia	6	8	12	8	19	27	13	23	22	12	23	9	182
Tunisia						2		5					7
Turkey	3	1	9	7	11	16	14	45	7	1			114
Ukraine	40	6	13	8	5	37	50	17	11	14	34	6	241
United Arab Emirates	21	32	55	195	99	65	31	18	11	15	2	14	558
United States	58	56	90	374	204	170	61	58	63	67	82	96	1379
Uruguay		2							1				3
Grand Total	201	202	284	657	422	440	370	241	182	218	179	268	3664

2017 Re-entry

For import or admission (info)	Horses Re-entry												
Sum of Total Number of animals (cveda)	Column Labels												
Row Labels	January	February	March	April	May	June	July	August	September	October	November	December	Grand Total
Algeria									19				19
Australia											6		6
Belarus					1								1
Canada							2	42		90	5		139
China						96							96
Hong Kong		60				3						20	83
Israel								3					3
Japan											3		3
Jordan									1				1
Korea, Republic Of									3				3
Malaysia									20				20
Morocco	1							1		252	16		270
Oman												4	4
Qatar	14	18	113	3	2						96		246
Russian Federation		2		6	5	7	41		6	6			73
Saudi Arabia	2												2
Serbia			1		3		13	3	15	1			36
Tunisia											2		2
Turkey						3			28				31
Turkmenistan									13				13
Ukraine				1			7						8
United Arab Emirates	31	68	151								2	1	253
United States	2	1	34	134	8	8	13	9	2	19	42	5	277
Grand Total	50	149	299	145	117	20	120	13	196	283	167	30	1589

2017 Permanent imports

For import or admission (info)	Horses Re-entry												
Sum of Total Number of animals (cveda)	Column Labels												
Row Labels	January	February	March	April	May	June	July	August	September	October	November	December	Grand Total
Algeria									19				19
Australia											6		6
Belarus					1								1
Canada							2	42		90	5		139
China						96							96
Hong Kong			60			3						20	83
Israel								3					3
Japan											3		3
Jordan									1				1
Korea, Republic Of										3			3
Malaysia										20			20
Morocco	1							1			252	16	270
Oman												4	4
Qatar	14	18	113	3	2						96		246
Russian Federation		2		6	5	7	41		6	6			73
Saudi Arabia	2												2
Serbia			1		3		13	3	15	1			36
Tunisia											2		2
Turkey						3			28				31
Turkmenistan									13				13
Ukraine				1			7						8
United Arab Emirates	31	68	151								2	1	253
United States	2	1	34	134	8	8	13	9	2	19	42	5	277
Grand Total	50	149	299	145	117	20	120	13	196	283	167	30	1589