INTERNATIONAL BREEDERS' MEETING

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Please note that due to changes in reporting from Australia, their reports will in future be reported one quarter in arrears behind the quarter being reported. Here we provide reports for the first and second quarters of 2009 for Australia. Please note that data are for the quarter being reported. Third quarter reports for other countries are provided after this in the usual way

REPORTS FOR FIRST AND SECOND QUARTERS 2009 FROM AUSTRALIA

First Quarter report from Australia for the period January 2009 - March 2009

Animal Health Surveillance Quarterly (AHSQ) Compiled by Animal Health Australia (AHA)
(http://www.animalhealthaustralia.com.au/status/ahsq.cfm)

STATE AND TERRITORY REPORTS

NEW SOUTH WALES (NSW)
Contributed by Rory Arthur, Department of Primary Industries

Hendra disease exclusion
Testing at the Australian Animal Health Laboratory excluded Hendra virus infection as the cause of death of a 13-year-old horse that died after a very short illness near Murwillumbah. The horse had shown both respiratory and nervous signs, and shortly before falling ill it had been grazing an old orchard frequented by fruit bats. Histopathology suggested Crofton weed (Ageratina adenophora) poisoning as the probable

cause of death. The only confirmed case of Hendra virus infection in horses in New South Wales occurred in 2006 in the Murwillumbah area.

QUEENSLAND (QLD)
Contributed by Greg Williamson, Queensland Department of Primary Industries and Fisheries

Equine emergency animal diseases
No cases of equine influenza (EI) infection have been detected in Queensland since 25 December 2007. Ongoing surveillance confirms that there is no EI disease in horses in Queensland.

No cases of Hendra virus have been recorded since the last cluster of infections identified in June - August 2008. Typically, horses with a febrile syndrome and respiratory and/or nervous signs are considered for Hendra exclusion. Twenty-seven cases of suspect Hendra virus in horses were investigated during this quarter; PCR tests were all negative for Hendra virus. Diagnoses of axonopathy, strangles and incidental respiratory infections were commonly made. Axonopathy (*injury to the axon of nerve cells*) is a common diagnosis in horses that present for Hendra exclusion.

An ongoing project to sample urine (*species unknown*) from south-east Queensland has begun. Samples are to be tested by PCR for Hendra virus.

Strangles (*Streptococcus equi*)
Strangles occurs sporadically in Queensland, and horses may be vaccinated with a sterilised, cell-free extract of *Streptococcus equi*. Four incidents of strangles were reported during the quarter, one of which involved mortalities.

Over a two-month period on a property in Pine Rivers Shire, 6 horses died and 8 were sick from an at-risk group of 100 animnals. The horses were all not vaccinated for strangles. Affected horses had fever, mucopurulent nasal discharge, lymphadenopathy, depression and anorexia. Equine influenza was excluded as the cause by PCR testing of nasal swabs and ELISA testing of sera. *S. equi* was cultured from nasal swabs. The property was quarantined, and the remaining sick horses responded to antibiotic therapy.

TASMANIA (TAS)
Contributed by Mary Lou Conway, Department of Primary Industries and Water

Severe respiratory disease in an aged mare
In the Wynyard district, north-west Tasmania, a 24- year-old mare died four days after developing severe respiratory distress. The mare had been in good health the previous weekend, when she had swum in the sea. Clinical signs included a fever (39 ºC), abdominal breathing, occasional soft cough and reduced respiratory sounds ventrally. There was no nasal discharge, and she was otherwise bright and eating.

On necropsy, friable pale masses were found in the pericardium and pleura and within the lung and liver parenchyma. The lungs had collapsed, and there was a large volume of pleural effusion. On histology, the masses were characterised as pulmonary adenocarcinoma, with metastases to the liver and pleura. The neoplasm was highly active and had the hallmarks of an aggressive growth.

The clinical presentation and death are believed to be due to an increase in the amount of fluid in the pleural cavity as a result of the recent activity (swimming), inducing increased pleural cavity pressure and thus respiratory failure. Eventually, however, the neoplasia would have compromised lung capacity sufficiently to cause the animal's death.

This case is unusual in that, although pulmonary carcinomas are the most common primary lung neoplasm in the dog, cat and cattle, they are not common in the horse; in horses, granular cell tumours predominate. Although not satisfying all elements of the equine influenza and Hendra virus case definitions, these diseases were excluded during the course of the investigation.

VICTORIA (VIC)
Nothing to report

NORTHERN TERRITORY (NT)
Nothing to report

SOUTH AUSTRALIA (SA)
Nothing to report

WESTERN AUSTRALIA (WA)
Nothing to report

SUSPECT EXOTIC OR EMERGENCY DISEASE INVESTIGATIONS
Exotic or emergency disease investigations reported, 1st January to 31st March 2009

Disease	Species	State	Month	Response	Finding
Equine Herpes Virus 1 - Abortigenic And Neurological Strains					
	Equine	NSW	Jan	2	Negative
	Equine	NSW	Mar	2	Negative
Equine Influenza					
	Equine	NSW	Jan	2	Negative
	Equine	NSW	Feb	2	Negative
	Equine	QLD	Jan	2	Negative
	Equine	QLD	Feb	2	Negative
	Equine	QLD	Mar	2	Negative
	Equine	VIC	Jan	3	Negative
	Equine	VIC	Mar	2	Negative
	Equine	VIC	Mar	3	Negative
	Equine	WA	Mar	2	Negative
Equine Viral Arteritis					
	Equine	NSW	Feb	2	Negative
Hendra Virus					
	Equine	NSW	Jan	2	Negative
	Equine	NSW	Feb	2	Negative
	Equine	NSW	Mar	2	Negative
	Equine	NT	Mar	2	Negative
	Equine	NT	Mar	3	Negative
	Equine	QLD	Jan	2	Negative

Equine	QLD	Jan	3	Negative
Equine	QLD	Feb	2	Negative
Equine	QLD	Feb	3	Negative
Equine	QLD	Mar	2	Negative

West Nile Virus Infection – Clinical

Equine	NSW	Feb	2	Negative

Key to response codes
1: Field investigation by government officer
2: Investigation by state or territory government veterinary laboratory
3: Specimens sent to the Australian Animal Health Laboratory (or CSIRO Entomology)
4: Specimens sent to reference laboratories overseas
5: Regulatory action taken (quarantine or police)
6: Alert or standby
7: Eradication

Second quarter report from Australia for the period April 2009 - June 2009

Animal Health Surveillance Quarterly (AHSQ) Compiled by Animal Health Australia (AHA)
(http://www.animalhealthaustralia.com.au/status/ahsq.cfm)

STATE AND TERRITORY REPORTS

QUEENSLAND (QLD)
Contributed by Greg Williamson, Department of Employment, Economic Development and Innovation

Equine emergency animal diseases
No cases of equine influenza infection have been detected in Queensland since December 2007, and ongoing surveillance activities confirm there is no equine influenza in Queensland.

Similarly, to the end of June 2009, no cases of Hendra virus infection were recorded; the last cluster of infections was in June - August 2008. Typically, horses with a febrile syndrome and respiratory and/or nervous symptoms are considered for Hendra exclusion, and 37 such cases were investigated during the quarter; all cases were PCR negative.

Strangles (*Streptococcus equi*)
Streptococcal infections are frequently diagnosed as a result of Hendra virus exclusion in horses with respiratory symptoms. The infections are generally due to *Streptococcus equi* (strangles) or *S. zooepidemicus*. Strangles occurs sporadically in Queensland, and horses are routinely vaccinated with a sterilised, cell-free extract of *S. equi*.

S. zooepidemicus is a relatively common streptococcal bacterium causing an infection that may occur concurrently with strangles in horses, and can cause zoonotic disease in humans. There were three diagnoses of streptococcal infection in horses this quarter. A typical case occurred in Kilkivan Shire, in mid-April, where 5 adult horses from an at-risk group of 12 presented with symptoms of strangles - purulent nasal discharge and lymphadenopathy progressing to abscesses.

S. zooepidemicus was cultured from the nasal discharge of the two horses that were sampled. *S. equi* was cultured from a pharyngeal abscess of one horse.

NORTHERN TERRITORY (NT)
Contributed by Francois Human, Department of Regional Development, Primary Industry, Fisheries and Resources

Equine Eosinophilic Gastroenteritis
A four-year-old stockhorse mare from a station in the Katherine region presented with weight loss and ventral oedema. Blood samples were sent to the Australian Animal Health Laboratory for exclusion of equine infectious anaemia, equine viral arteritis and Hendra virus; all were ruled out. The horse deteriorated quickly and was euthanased. Necropsy revealed swelling and inflammation of the stomach and intestinal wall, together with enlarged mesenteric lymph nodes. Straw-coloured fluid was present in the abdominal cavity and around the heart. Equine eosinophilic gastroenteritis was diagnosed on histopathology.

Equine eosinophilic gastroenteritis is a specific disease of equines; the cause is unknown, but seems to represent a chronic hypersensitivity. Lesions may occur anywhere from the oesophagus to the rectum. In this case, the lesions were most severe in the stomach. An eosinophilic cholangitis was present, which is a relatively common feature of the disease.

NEW SOUTH WALES (NSW)
Nothing to report

SOUTH AUSTRALIA (SA)
Nothing to report

TASMANIA (TAS)
Nothing to report

VICTORIA (VIC)
Nothing to report

WESTERN AUSTRALIA (WA)
Nothing to report

SUSPECT EXOTIC OR EMERGENCY DISEASE INVESTIGATIONS

Exotic or emergency disease investigations reported, 1st April to 30th June 2009

Disease	Species	State	Month	Response	Finding
			Contagious equine metritis		
	Equine	SA	Apr	1	Negative
	Equine	SA	May	1	Negative
	Equine	SA	Jun	1	Negative
			Equine herpesvirus 1 - abortigenic and neurological strains		
	Equine	SA	June	1	Negative
	Equine	SA	May	2	Negative
			Equine Influenza		
	Equine	NSW	Apr	2	Negative
	Equine	NSW	May	2	Negative
	Equine	NSW	Jun	2	Negative
	Equine	QLD	Apr	2	Negative
	Equine	QLD	May	2	Negative
			Hendra Virus		
	Equine	NSW	Apr	2	Negative
	Equine	NSW	Apr	3	Negative
	Equine	NSW	May	3	Negative
	Equine	NSW	Jun	3	Negative
	Equine	NT	May	3	Negative
	Equine	QLD	Apr	2	Negative
	Equine	QLD	May	2	Negative
	Equine	QLD	Jun	2	Negative

Key to response codes
1: Field investigation by government officer
2: Investigation by state or territory government veterinary laboratory
3: Specimens sent to the Australian Animal Health Laboratory (or CSIRO Entomology)
4: Specimens sent to reference laboratories overseas
5: Regulatory action taken (quarantine or police)
6: Alert or standby
7: Eradication

REPORT FOR THE THIRD QUARTER 2009

ARGENTINA
Confirmed nothing to report.

AUSTRALIA
As reported above, the third quarter 2009 report for Australia will be provided in arrears at the beginning of the fourth quarter report.

CANADA
Confirmed nothing to report

CHILE
EHV-1 Abortion
An outbreak was reported on 15th August with the last case reported on 15th September. Servicio Agricola y Ganadero confirmed diagnosis by serology and agent isolation. The outbreak was limited affecting seven Thoroughbreds on one premises. The mares were vaccinated with Pneumoabort-K during the fifth, seventh and ninth months of pregnancy, but all mares aborted during the ninth and tenth months of their pregnancies.

DENMARK
Confirmed nothing to report.

FRANCE
(Information supplied via RESPE, the French network for epidemiosurveillance of equine diseases)

Contagious Equine Metritis (CEM)
Two premises (one premises with three horses and one premise with one case) were confirmed by agent isolation. One case was confirmed by a veterinary laboratory and the other two by a medical laboratory. These cases occurred in non-racing horses in Manche and Orne.

Piroplasmosis
Remains endemic in France.

EHV Respiratory Disease
One case with clinical signs involving a Thoroughbred horse in Oise was confirmed by sero-conversion. The animal was not vaccinated and no other animals on the premises were affected.

EHV-1 Neurological and Respiratory Disease
An outbreak of EHV neurological and respiratory disease was identified among seven sport horses on a horse riding school in the department of Nord. Only some of the animals were vaccinated. PCR and virus culture were positive from blood samples and nasal swabs. Ataxia, recumbency, fever and mild nasal discharges were reported. Five of the seven clinically affected horses were euthanazied. The viral strain isolated exhibited the neurophathogenic mutation that has been associated with neurological outbreaks of EHV-1 infection

Equine Influenza
Three outbreaks of EI were confirmed in non-Thoroughbred horses. Clinical signs included coughing and fever. One case occurred in Saône-et-Loire in a stud farm involving three horses. One case occurred in Yvelines in a riding school involving one fully vaccinated horse. The latest outbreak occurred in Vienne involving six non-vaccinated horses. EHV-1 was confirmed by PCR of nasal swabs. Results of the strain typing are awaited.

GERMANY
Confirmed nothing to report.

HONG KONG
Confirmed nothing to report.

IRELAND (Republic of)
Strangles (*Streptococcus equi)*
There were 13 outbreaks of strangles involving 18 cases in Leinster, Munster and Connacht.

Piroplasmosis
The investigation reported previously and led by the Department of Agriculture is still ongoing. The only clinical cases were the three that occurred in late June. The second round of serological testing in seropositive horses identified in the initial investigation and their contacts is expected to be completed shortly.

ITALY
West Nile Virus (WNV)
An outbreak of WNV commenced in August and was confirmed by CESME (Ist. Zooprofilattico Teramo) by PCR. The outbreak was limited affecting 45 performance and breeding horses. Of the 45 infections reported all were serologically positive, 28 had clinical signs and seven were reported dead. Two horses were detected positive in a different geographical areas in Tuscany. Three cases were also reported in humans. (Further information can be found at www.eurosurveillance.org) .

JAPAN
EHV-4 Respiratory Disease
A case was reported on 1st September 2009, confirmed by Hokkaido Hidaka Livestock Service Centre by RT-PCR. The outbreak was limited and clinically mild affecting one unvaccinated Thoroughbred horse. The yearling Thoroughbred presented with a mucoprulent nasal charge and fever.

Tetanus
A limited outbreak was reported on 18th August 2009, affecting one horse, which later died.

NEW ZEALAND
Confirmed nothing to report.

SINGAPORE
Confirmed nothing to report.

SOUTH AFRICA

EHV-1 Abortion

A limited outbreak was reported in May 2009 and is ongoing. Diagnosis was confirmed by the University of Pretoria using immunoperoxidase staining, histopathology and qPCR. The outbreak affected 30 breeding stock on five Thoroughbred and other studs.

Strangles (*Streptococcus equi)*

There is an ongoing outbreak of strangles diagnosed by agent isolation. This is limited and clinically mild affecting at least 40 Thoroughbreds and non-Thoroughbreds on at least of five premises. There is no history of vaccination. Clinical signs of the disease were also reported on various properties in South Africa.

SOUTH KOREA

Regret no report received.

SPAIN

Piroplasmosis

Piroplasmosis remains endemic throughout Spain.

SWEDEN

Strangles (*Streptococcus equi)*

Strangles is endemic throughout the country affecting all types of horses – 24 cases have been reported.

Salmonellosis

Lmited outbreaks affecting breeding stock on three different premises in the south and middle of Sweden were reported.

SWITZERLAND

Anaplasmosis (*Anaplasma phagocytophila*)

An outbreak was reported in June and was diagnosed by agent isolation and clinical signs. The outbreak was limited to one non-thoroughbred horse.

Borreliosis (*Borrelia burgdorferi*)

An outbreak commenced in July and was confirmed by serology and clinical signs. The outbreak was limited to one non-Thoroughbred horse.

Piroplasmosis (*Babesia caballi* and *Theileria equi)*

An outbreak was reported in August and was diagnosed by serology and clinical signs. The outbreak was limited affecting three non-Thoroughbred horses on three different premises in the northern and central parts of the country. The breakdown of the cases was as follows: one case of *Babesia caballi* infection, one case of *Theileria equi* infection and one case of combined *Babesia caballi* and *Theileria equi* infection.

CEM (*Taylorella asinigenitalis*)

A case was reported in July and was diagnosed by agent isolation. One donkey was affected and diagnosis was confirmed following a routine examination of a Poitou-donkey before semen collection.

Salmonellosis
A case was reported in August with diagnosis by agent isolation and clinical signs. One non-Thoroughbred was affected.

The attached scientific summary has also been kindly provided by Switzerland and may be of interest:

The invasive mosquito *Aedes japonicus* in Central Europe

F. Schaffner, C. Kaufmann, D. Hegglin and A. Mathis (2009): The invasive mos-quito *Aedes japonicus* in Central Europe; accepted for 'Medical and Veterinary Entomology'
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Abstract
Complaints about a biting pest led to the recognition of invasive *Aedes (Finlaya) japonicus japonicus* (Theobald) (Diptera: Culicidae) in Central Europe. Larval collections from cemetery vases revealed a colonized area of approximately 1,400 km^2 in northern Switzerland spreading into bordering Germany, suggesting that the mosquito has been established in this region for several years. Within this range, larvae of *Ae. japonicus* were recovered from more containers than the most common resident culicid species *Culex pipiens*. Possible introduction sites (used tyre yards, international airports) revealed few or no larvae, and the mode of introduction remains unclear. Given the vector potential of this species for arbo-viruses, implementation of surveillance and control measures should be conside-red.

The 'Asian bush' or 'Asian rock pool' mosquito *Aedes japonicus japonicus,* a listed invasive species (ISSG, 2009), was first recognized as established outside its native range in 1998 in North America (Peyton *et al.*, 1999), where it subsequently has been recovered in 22 states of the United States, including Hawaii, and also in parts of Canada (Williges *et al.*, 2008). In Europe, a few larvae of this species were identified in France in 2000 on a storage yard of imported used tyres (Schaffner *et al.*, 2003), but this introduction was eliminated (Schaffner, un-published). Since 2002, this species has repeatedly been observed within a re-stricted area of two neighbouring used tyre yards in Belgium (Versteirt *et al.*, 2009). *Aedes japonicus* is a competent laboratory vector of several arboviruses (compiled in Williges *et al.*, 2008), including West Nile virus (WNv). This virus is regularly detected in field-caught specimens of *Ae. japonicus* in the USA (CDC, 2008) indicating that this species which shows pronounced blood-feeding on humans and other mammalian hosts (Apperson *et al.*, 2004; Molaei *et al*., 2009) also feeds on birds. This was confirmed by laboratory rearing of *Ae. japonicus* which readily bloodfed on quails (Williges *et al*., 2008). Thus, the mosquito species could be suspected to play a role as a bridge vector in WNv transmission.

In July 2008, a female mosquito resembling the Asian tiger mosquito *Ae. albo-pictus* (Skuse) was sent to our laboratory by the local veterinary office from the canton Aargau (Switzerland, north of the Alps), because of complaints about insect nuisance. Morphological examination of the damaged insect revealed that it was neither *Ae. albopictus* nor any species native to Europe. Thus, a field inve-stigation was implemented to (i) collect more individuals of this species and (ii) check whether *Ae. albopictus* had established in the same area from which it had been reported in 2007 based on the identification of a single specimen from a photograph (Wymann *et al.*, 2008).

Initial larval collections revealed the presence of *Ae. japonicus japonicus* at several sites. Larvae and adults obtained from rearing in a secured insectary were identified using the electronic key for mosquitoes of Europe (Schaffner *et al.*, 2001) and the printed key for Japan (Tanaka *et al.*, 1979). The damaged speci-men received in July was confirmed as the same species. Moreover, a reexami-nation of the photographed specimen identified as *Ae. albopictus* revealed that it was *Ae. japonicus*, considering the main differences in ornamentation of meso-notum, palpi extremity and fifth tarsomere. Further larval surveys focused on small man-made containers such as vases in cemeteries, rain water catchments in gardens, catch basins, fountains, used tyres, and natural mosquito larval habitats such as tree holes, ponds and ditches (rock holes, the typical larval habitat for *Ae. japonicus*, are not occurring at all in the studied area). Specific investigations were made in 2008 from August 14th to November 6th, and observations made in July were included in the data set. Inclusion criteria of municipalities surveyed were existence and accessibility of cemeteries. The surveyed area was gradually ex-tended from positive sites in all directions until a halo of negative sites surrounding the distribution area (positive sites) was determined. Sites were defined as negative if there was at least one habitat containing mosquito larvae of other species or five sites without such larvae. Some specific sites were checked be-cause of their possible role as introduction points (used tyre storage, international airport).

A total of 3,548 potential aquatic habitats were checked in municipalities of Switzerland (n = 111), bordering Germany (n = 9) and France (n = 3), of which 623 (17.6%) were positive for mosquito immature stages. *Aedes japonicus* was detected in 160 containers, mainly in vases (73.8%), fountains (7.5%), tyres (6.3%), catch basins (4.4%) and rain water casks (3.1%) in Switzerland (38 municipalities) and in two municipalities in Germany located across the Rhine river (Figure 1). The colonized area covers approximately 1,400 km^2. In addition, larvae of nine mosquito species previously known from this area were identified during the survey: *Culex pipiens pipiens* L. and *Cx. hortensis hortensis* Ficalbi (503 sites with one or both species), *Anopheles plumbeus* Stephens (38 sites), *Ae. Geni-culatus* (Olivier) (9 sites), *An. maculipennis* Meigen *s.l.* (6 sites), *Cx. torrentium* Martini (3 sites), *Culiseta annulata* (Schrank) (3 sites), *Cs. longiareolata* (Macquart) (3 sites), and *Cx. territans* (Walker) (2 sites). All species were found in artificial vessels and a few in tree holes (*Ae. geniculatus*, *An. plumbeus*, *Cx. pipiens*), in a stream (*An. maculipennis s.l.*) and in an oxbow lake (*Cx. territans*).

Vases in cemeteries appeared to be particularly useful for assessing the presence of *Ae. japonicus*. Most of the surveyed cemeteries (116/134, 87%) provided three or more water-containing vases. In 31 out of 34 of the cemeteries, *Ae. japonicus* was detected in such vases, in only 3 cases was the species exclusively found in other containers. As vases were systematically checked, we calculated a vase index (percentage of positive vases) for each of the four species occurring therein and for each cemetery (Table 1). The overall mean vase index of the classical container breeding species *Cx. pipiens* was the highest (10.0%). However, at sites where *Ae. japonicus* was present, this species occurred more frequently than the other three species whose corresponding index values were significantly lower as revealed by a Friedman-test ($p<0.01$) and a post-hoc test after Conover (1980) ($p<0.05$). Nevertheless, there is no statistical evidence (Mann-Whitney test, $p>0.05$) for competition on a population level between *Cx. pipiens* and *Ae. japo-nicus* as the index values of *Cx. pipiens* are similar at sites with or without *Ae. japonicus*.

Our study confirms that monitoring artificial container-breeding mosquitoes in cemeteries is a suitable approach as they provide numerous habitats for larvae and also adults and are easily accessible for investigators (Vezzani, 2007). The study also demonstrates that vases which can efficiently be checked are reliable indicators for the presence of *Ae. japonicus*, and hence the vase index seems suitable for early detection and monitoring of this species.

During the summer of 2008, four persons living in the study region had com-plained about nuisance mosquitoes and sent specimens to our laboratory, of which three were *Ae. japonicus*. In order to estimate the end of adult activity, we placed oviposition surfaces (pieces of polystyrene, 5*5 cm) in larval containers at three sites and checked them weekly. Eggs of *Ae. japonicus* were last laid during weeks 42/43, October 2008, as determined by the identification of hatched larvae.

No obvious source of introduction of *Ae. japonicus* could be identified. One used tyre yard was found with this species, but it was located at the border of the colonized area, had only a few larvae, and no imported used tyres. All cemeteries (n = 5) in the vicinity of the international airport of Zurich, also located at the border of the distribution area, were negative.

The sequences of part (approximately 400 bp) of the mitochondrial NADH de-hydrogenase subunit 4 gene of single mosquitoes from four peripheral locations of the distribution area were determined (Fonseca *et al.*, 2001). Two of the se-quences were identical to haplotype 1 (GenBank acc. nr. AF305879), whereas the other two differed at single polymorphic sites. Four corresponding sequences of individual *Ae. japonicus* collected in Belgium differed by 1-3 nucleotides from these Swiss sequences.
In conclusion, it can be stated that (1) *Ae. japonicus* has been introduced into Switzerland and has spread over an area of approx. 1,400 km^2, including bordering Germany (Baden-Württemberg); (2) the earlier identification of *Ae. albopictus* in Switzerland north of the Alps was erroneous, and there is no evidence that this species is present in that area; (3) *Ae. japonicus* were more frequent in vases than the most common European species *Cx. pipiens*, and (4) *Ae. japonicus* occurs in urbanized environments in man-made sites. This is the first finding of proliferation and spread of an invasive mosquito in Central Europe. Considering the size of the colonized area, it can be assumed that this species has been present for at least several years. Further studies should monitor its spread, bionomic, and potential for vectoring native and exotic pathogens.

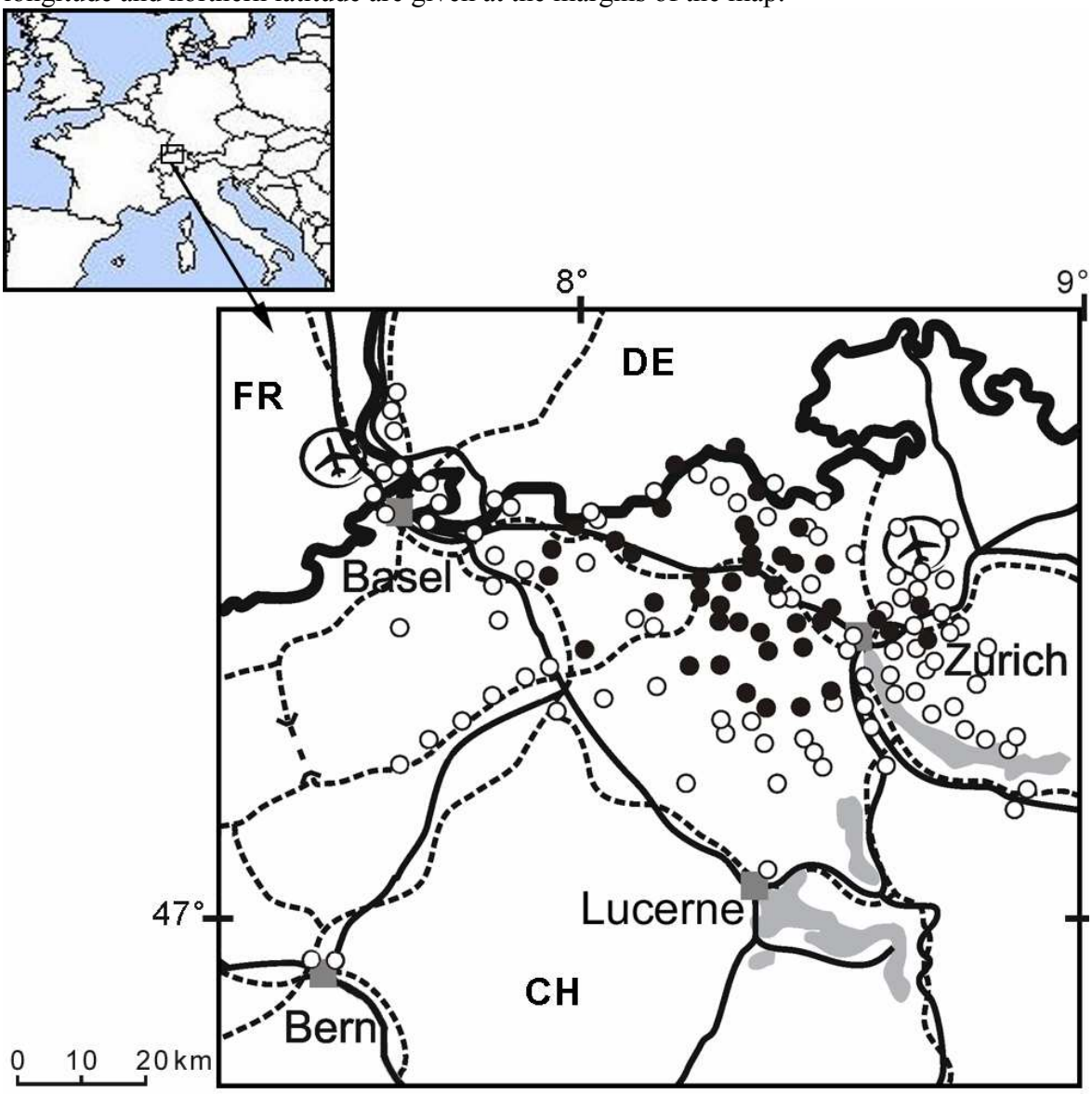
Table 1. Occurrence of mosquitoes in vases on cemeteries: A- *Ae. japonicus* present (n=33 cemeteries), B- *Ae. japonicus* absent (n=93), C- All vases from whole studied area (n=126)

	Vases	All mosquitoes		*Ae. japonicus*		*Cx. pipiens*		*An. plumbeus*		*Ae. geniculatus*	
	no. investigated	no. pos.	mean index†	no. pos.	mean index†	no. pos.	mean index†	no. pos.	mean index†	no. pos.	mean index†
A	833	193	29.1	118	21.4	96	11.8*	7	0.6*	2	0.1*
B	2186	244	10.0	0	0.0	231	9.4	13	0.5	5	0.1
C	3019	437	15.0	118	5.6	327	10.0	20	0.5	7	0.1

* significantly lower index values compared to index values for *Ae. japonicus* (Friedman-test: $p<0.01$; post hoc test (Conover 1980): $p<0.05$)
† percentage of positive vases

pos. = mosquitoes present

Figure 1. Distribution map of *Aedes japonicus* in Central Europe, 2008. Black dots: sites positive for *Ae. japonicus*; white dots: negative sites. Thick black line: country borders (CH: Switzerland, DE: Germany, FR: France); thin black line: highways; dotted black line: major railway lines; grey areas: major lakes; grey squares: major Swiss cities; also indicated are the international airports. Eastern longitude and northern latitude are given at the margins of the map.



References

References can be supplied on request

TURKEY
Confirmed nothing to report.

UNITED ARAB EMIRATES
Piroplasmosis *(Babesia caballi* and *Theileria equi)*
Piroplasmosis is endemic in the UAE and cases are reported periodically. The confirming laboratory is the Central Ventral Research Laboratory Dubai and the methods of diagnoses are serology and agent isolation. Outbreaks are usually limited and affect non-Thoroughbreds.

UNITED KINGDOM
EHV-4 Respiratory Disease
In a yearling showing respiratory signs, EHV-4 was isolated from nasopharyngeal swabs from three animals.

EHV-2:
EHV-2 was isolated from a nasopharyngeal swab.

Equine Influenza:
In Herefordshire, England a 12 year old unvaccinated pony stallion which showed respiratory signs, tested positive for equine influenza by nucleoprotein ELISA on a nasopharyngeal swab. Subsequently influenza virus was isolated and sequenced. The isolate belonged to clade 1 of the Florida sublineage of the American lineage of H3N8 equine influenza virus. Clade 1 viruses are still relatively rarely isolated in Europe (so far only in Sweden; Lincolnshire and Cheshire, UK although they have increased recently as a proportion of EIV isolations). They have been more commonly found in the U.S. and Japan and were associated with the outbreak in Australia in 2007.

The results of a paired haemagglutination inhibition (HI) test suggested infection with equine influenza virus prior to the time of the first sample. The outbreak was thought to have started after three ponies from this yard returned from a local show and subsequently developed clinical signs. Vaccination against influenza is not mandatory for attendance at many of the local shows. The infections spread through the whole yard of about 35 animals, but as the signs were mild only five ponies required treatment.

In Kent, England a seven year old un-vaccinated pony gelding which had nasal discharge, coughing, anorexia and pyrexia, tested positive for equine influenza by nucleoprotein ELISA on a nasopharyngeal swab and The equine influenza rt-PCR test on the same nasopharyngeal swab confirmed the previous positive result. Unfortunately no virus could subsequently be isolated.

Contagious Equine Metritis (*Taylorella equigenitalis*)
On 22nd October 2009, the Department for Environment, Food, and Rural Affairs (Defra) confirmed a single subclinical case of contagious equine metritis (CEM) in a 7 year-old non-Thoroughbred mare on a premises near Milton Keynes, Buckinghamshire, England. The diagnosis was made on the basis of initial agent identification in a sample submitted to a private Horserace Betting Levy Board (HBLB) quality approved laboratory with subsequent confirmation by culture and qPCR by the Veterinary Laboratories Agency (VLA) Reference Laboratory at Bury St Edmunds, Suffolk. Restrictions have been placed, a veterinary investigation initiated and treatment of the mare undertaken in accordance with the HBLB Codes of Practice. Initial investigations have indicated that this is a separate incident to that reported previously in July 2009, which involved a single non-breeding, non-Thoroughbred competition

stallion . Defra declared that first incident resolved on 10th September 2009, following successfull treatment of the affected animal and with no onward transmission having been identified.

UNITED STATES OF AMERICA

Contagious Equine Metritis (CEM)

According to the most recent update from the USDA of 3rd September, a total of 22 stallions, including one that is now a gelding, have been confirmed positive for *Taylorella equigenitalis* since the current investigation commenced mid-December 2008. The most recently detected positive was an aged domestic Lippizzaner Stallion in Wisconsin, the ninth stallion found in that state. Some 17 of the 22 carrier stallions were detected on the first set of swabs that were collected. The carrier stallions were located in the following states: Georgia (1), Illinois (3), Indiana (3), Iowa (1 gelding), Kentucky (4), Texas (1), Wisconsin (9). The total number of culture positive mares remains at five, with two in California, two in Illinois and one in Wisconsin. Twenty of the positive stallions have successfully undergone treatment and are now considered free of *T. equigenitalis*. All five of the positive mares have been treated and confirmed free of *T. equigenitalis*. Three of the eight states that had culture positive horses, Georgia, Indiana and Kentucky, have completed testing and treatment protocols for all known CEM cases and exposed horses and are considered disease-free. None of the CEM positive stallions and mares have yet been identified as the source of the outbreak. However, epidemiological investigations are continuing. Aside from the known carrier stallions and mares that have been identified, an additional 961 horses have been potentially exposed to *T. equigenitalis*. The 988 carrier and potentially exposed horses have been located in 48 states, excluding Rhode Island and Hawaii. All strains of *T. equigenitalis* recovered so far have been streptomycin resistant and based on pulse-field gel electrophoresis analysis are very closely related to one another. There is no evidence to indicate any involvement of the Thoroughbred breeding population in the USA.

Eastern Equine Encephalomyelitis (EEE)

The latest USDA reports indicate that a total of 249 equine cases of EEE have been confirmed, with the majority of infections in the Southern States of: Florida (67), Georgia (41), Mississippi (36), Louisiana (21), Alabama (19) and North Carolina (16). Virus activity has also been reported in other states along the Eastern seaboard extending northward to the Canadian border, with Maine reporting an unprecedented number of equine cases of the disease (14) compared to previous years. The current national total of 249 equine cases of EEE in 15 states is significantly higher than the 185 cases in 15 states recorded in 2008.

West Nile Virus (WNV)

The current number of reported cases of WNV in horses is 164 with the majority of cases confirmed in Washington State (64). Multiple cases of the disease have occurred in a number of other states with totals in double digits for California, Colorado and Montana. Washington State also had the highest number of recorded equine cases of WNV in 2008 followed by California. The equine cases total of 164 for 2009 compares with 202 cases of WNV confirmed in humans.

Vesicular Stomatitis (VS)

Limited outbreaks of VS were confirmed in June on two premises in Texas and three in New Mexico. These involved a total of three horses in Texas and four in New Mexico. The last affected premises in Texas was released from quarantine on 24th July, and in New Mexico on 18th August. VS was previously last recorded in the USA in Wyoming in 2006.

Piroplasmosis (*Theileria equi*)

Further to the previous report to the ICC confirming that seven horses had tested positive for *Theileria equi* infection on a premises in Missouri in June, the USDA recently reported resolution of this outbreak.

With the exception of three horses that were illegally removed from the index premises and from a premises in Kansas directly linked to that stable, all of the piroplasmosis positive horses have been euthanized. Tick surveillance on the affected premises confirmed a very limited number of ticks, none of which are known competent vectors of *T. equi*. Transmission of the infection is believed to have been by iatrogenic means.

Equine Influenza
A limited number of isolates of H3N8 equine influenza virus have been recovered from five states with no reports of unusual influenza virus activity in various states.

EHV-1 Neurological Disease
An outbreak of EHV-1 neurological disease was confirmed on a riding and boarding ranch in Pennsylvania in July. Severe neurological disease was reported in six horses, all of which had to be euthanized. The disease was not associated with prior evidence of respiratory signs in any of the affected animals. The infection was restricted to one of five barns on one premises having a population of over 100 horses.

Strangles (*Streptococcus equi)*
Outbreaks of strangles have been reported from various states although the frequency of the disease does not appear to be higher than in previous years.

USA have also kindly supplied the additional information below on VEE in Central America
Venezuelan Equine Encephalomyelitis (VEE)
There have been reports from the O.I.E. in late August/early September of sporadic equine cases of VEE in three districts in Belize and on two premises in Costa Rica, Central America. No information is available on the virus subtype involved or whether the horses involved had been vaccinated against VEE.

Venezuela
No report received

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