NEWS FROM EUROPE

New Conditions If you are investigating a disease that may be previously unreported, why not provide a short preliminary description and leave your contact details.
Two such reports are given in avian species, one from Southern, and one from Northern Europe:

Dramatic Infertility And Embryo Mortality In A Lesser Kestrel (*Falco naumanni*) Captive Breeding Program In Spain

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The lesser kestrel (*Falco naumanni*) is a migratory bird of prey that nests colonially in (old) buildings in Southern Europe. In recent decades the species has declined, probably due to changes in agriculture, but building restoration and competition with other birds for nest sites are also factors. Several captive breeding programs as part of a Spanish national conservation program are in progress. GREFA is a non-government organisation founded in 1980 for the study of ecology and conservation with a staff of biologists, veterinarians and volunteers. Work is focused on the wildlife hospital however other significant activities include captive breeding projects, collaborative research, international field work and conservation work on specified areas and species, such as the lesser kestrel.

During the year 2000 a dramatic drop in chick production was observed in the lesser kestrel captive breeding program at the GREFA Wildlife Hospital, Madrid, Spain.

Necropsies of dead eggs showed that embryos died at different stages of development. 276 eggs from the first clutch were incubated artificially, 57% were dead-in-shell and 42% were infertile. As an iatrogenic problem was suspected, we decided to breed the second clutch by natural incubation. 100% of 124 eggs were infertile or dead-in-shell.

Bacteriological cultures were undertaken on eggs and embryos in 1997-99 for salmonellae with negative results, however *Salmonella enteritidis* was isolated from the intestine of an adult bird from the colony on one occasion. *E.coli*, *Streptococcus sp.* and *Staphylococcus sp.* were isolated in 11 eggs from 127 necropsied eggs (16%). A Bio-Merieux VIDAS Chlamydia test for *Chlamydia trachomatis* antigen (but capable of detecting genus specific antigen) gave 20 % positive results from 127 dead-in shell eggs.

As chlamydia was then suspected, over the winter months of 2000-2001, all adults birds were treated for 45 days with a combination of doxycycline (50 mg/kg/day) and enrofloxacin (15mg/kg/day) in-feed medication.

The 2001 breeding season produced 318 eggs and 115 chicks from 43 breeding kestrel pairs. 153 egg necropsies with bacterial cultures and Bio-Merieux VIDAS chlamydia tests, all produced similar results to the previous year. Some embryos and dead chicks were tested by PCR for *Chlamydia psittaci*, and all gave negative results.

Material from embryos and chicks was inoculated into eggs and cell cultures for attempted virus isolation. Only an adenovirus, of doubtful significance, was isolated, from chick tissues.

It appears that this year (2001) we have recovered the normal production rates for captive lesser kestrel but we do not know yet the reason for the dramatic infertility and embryo mortality.

YEAR	No. BREEDING PAIRS	No. TOTAL EGGS	No. INFERTILE EGGS	No. DEAD-in SHELL EMBRYOS	No. CHICKS HATCHED ALIVE
1998	39	273	83	78	112
1999	46	364	95	130	139
2000	53	400	162	218	20
2001	43	318	58	145	115

YEAR	FERTILITY	CLUTCH INDEX	% EGGS HATCHED
1998	69.9%	7	58,9%
1999	73,9%	7,9	51,67%
2000	59,5%	7,5	8,4%
2001	81,7%	7,4	44,2%

We would be grateful if workers in similar fields could offer comment and suggestions?

We acknowledge the help of Paul Duff, UK, *(and ?)*

Circovirus in wild birds in the Netherlands

Increased mortality in multiple wild bird species, including gulls, crows, and pigeons, was reported by rehabilitation centres in the Netherlands since the end of May. Clinical signs included ataxia, diarrhoea and apathy.

54 birds of 21 species were submitted to the Department of Virology, Erasmus University, Rotterdam, for pathologic and virologic examination.

The results of virus isolation and RT-PCR procedures for flaviviruses (including West Nile Virus), avian paramyxoviruses (including Newcastle disease virus), influenza virus, and infectious bursal disease virus were negative.

Histopathology revealed that the most frequently seen lesion in multiple species was lymphocytic necrosis in lymphoid organs. The presence of a circovirus-like agent was identified by electron microscopic examination of characteristic basophilic intracytoplasmic inclusions in the bursa of Fabricius in two species: Black headed gull (*Larus ridibundus*) and domestic pigeon (*Columbia livia*). Similar inclusions were found in two other species: wood pigeons (*Columba palumba*) and oystercatcher (*Haemotopus ostralegus*).

Circovirus infections in birds are associated with immunodeficiency-related diseases. They are known to cause disease in chickens (chicken anaemia virus), psittacines (psittacine beak and feather disease), and pigeons (pigeon circovirus). In Europe, circovirus infection has been recorded in domestic pigeons, but not other free-living birds.

Further studies are underway to determine the possible relationship of the circovirus-like agents found, the extent and distribution of the infection in wild bird species, and their significance for the observed mortality. Samples from Swedish birds will also be examined in collaboration with the National Veterinary Institute in Uppsala, Sweden.

Thijs Kuiken DVM PhD, Ron Fouchier PhD, Ab Osterhaus DVM PhD, Department of Virology, Erasmus University, Rotterdam.

Research Project On Wild Boar Diseases

The wild boar (*Sus scrofa*) is the most common wild ungulate in the Iberian peninsula. In the last decades, its population has increased dramatically in Europe. Suids are considered a reservoir host for

many diseases that affect domestic pigs (e.g. classical swine fever) and also of zoonoses such as TB. Some viral or bacterial agents may also be relevant for the dynamics of these boar populations (e. g. Aujeszky´s disease virus). Therefore, the wild boar is a good model to study the role of diseases in vertebrate population dynamics, and specially to study the impact of varying management systems on its health status.

In spite of its ecological, sanitary and socio-economical importance, little information on the role of disease in wild boar populations is available. Recently, the funding for the research project "Scientific basis for the prevention of health risks in game production: the wild boar" has been approved by the Spanish Science and Technology Ministry. It will be carried out by the IREC (the national institute for game biology) from 2002 to 2005. We hope to identify risk factors associated in wild boar production. Our main goals are (1) to describe the epidemiology of the most prominent diseases of Spanish wild boar populations, with special emphasis on diseases such as TB, that are relevant for public health, domestic livestock breeding, game production and conservation, and (2) to study the role of disease in wild boar population dynamics.

Any input and collaboration with research groups from other countries will be most welcome. Contact address:
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European Section. Material suitable for publication includes news of recent wildlife disease outbreaks and new diseases in Europe, short case reports, announcements and reports of relevant meetings in Europe, and job and scholarship announcements. Submissions should be in English, but members for whom English is a second language, will be accommodated as far as possible. The deadline for the next issue is January 2002.
Please mail, fax or e-mail submissions to, Paul Duff, VLA Penrith, Merrythought, Calthwaite, PENRITH, Cumbria, CA11 9RR, United Kingdom, *e-mail* p.duff@vla.maff.gsi.gov.uk
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