

# THE VETERINARY PATHOLOGY REPORT

Australian Society for Veterinary Pathology  
S.A. Department of Agriculture  
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<u>PAGE</u>	<u>CONTENTS</u>
2	ASVP CONFERENCE 1988 IN SYDNEY
	STATE REPORTS
2	Victoria
4	South Australia
5	Western Australia
8	Northern Territory
9	Queensland
10	REPORTS FROM OVERSEAS - PAPUA NEW GUINEA
11	DIARY DATES
11	STATE REPRESENTATIVES
12	JOBLINE

DEADLINE FOR JANUARY ISSUE - 4 DECEMBER

## **ADVANCE NOTICE - ASVP CONFERENCE & AGM 1988**

The AGM and Annual Conference will again be in Sydney at the Ian Clunies Ross Lecture Theatre at the Vet. School which has been booked for the 14th and 15th May. Mark this in your diary!

As 1988 is the bicentenary year accommodation is scarce. The executive had hoped to hold the Conference in Canberra but no accommodation was available because of other conference bookings at the time. Accommodation is also heavily booked in Sydney for the same reason but we can get limited bookings in several of the colleges. There will be further details provided in the next Vet. Path. Report.

Delegates to our conference may also be interested in the Centenary ANZAAS meeting, which is also to be held at Sydney University from the 16-20 May. As the AVA conference is not until the 18th, in Canberra, attendance at all three meetings may be possible. Some may also be interested in the Fish Diseases Refresher Course in Sydney on the 23-27 May.

At this stage we are planning to hold the 1989 ASVP conference in Adelaide.

## **EDITORIAL**

In this issue we have a welcome contribution from overseas, in fact from the National Veterinary Laboratory in Papua New Guinea. As we have a number of members overseas we hope this article will encourage them to contribute also.

A full list of the State representatives and their contact addresses is also published on page 18 of this issue. Our apologies to those who were not correctly listed in the previous issue.

**VICTORIA** - Sue Friend

### REGIONAL VETERINARY LABORATORY HAMILTON

#### LONG TERM EFFECTS OF PHALARIS POISONING

Phalaris staggers was generally not a problem this year except on one property where progressive paresis, paralysis and death occurred in a mob of 170 sheep, severely affected by Phalaris staggers as weaners in 1986. Sheep were noticed to become ataxic and finally became recumbent and died. Tremor or convulsions were not a feature. Deaths had occurred sporadically throughout 1986 and early 1987, and totalled nearly half the flock before we were asked to investigate.

Histological examination of 3 weak sheep revealed extensive granular brown pigmentation of neurones in the brain and spinal cord with widespread loss of myelinated axons, sufficient to explain the clinical syndrome. Long term persistence of neuronal pigmentation in sheep which have recovered clinically from Phalaris staggers is well recognized here. The protracted ongoing episodes of weakness following exposure to Phalaris are a new manifestation locally.

#### CANINE HERPESVIRUS INFECTION (C. Lenghaus)

Tissues were received from a one week old Blue Heeler pup which had died with respiratory distress. At post mortem the referring veterinarian had noticed petechial haemorrhages throughout the viscera, particularly the kidneys, and congested lungs. The provisional diagnosis of neonatal herpesvirus disease was confirmed histologically, with numerous foci of necrosis and haemorrhage in liver, lung, kidney and spleen. Typical herpesvirus intranuclear, eosinophilic inclusion bodies were present in many cells in these tissues.

### 3.

Herpesvirus infection can usually be diagnosed with confidence in neonatal pups because of the characteristic focal haemorrhages visible at post mortem in the cortex of the kidneys, and congested lungs. The provisional diagnosis of neonatal herpesvirus disease was confirmed histologically, with numerous foci of necrosis and haemorrhage in liver, lung, kidney and spleen. Typical herpesvirus intranuclear eosinophilic inclusion bodies were present in many cells in these tissues.

#### WHEN IS A DOG A FOX? (D. Williams)

At least 10 carefully skinned carcasses of a medium sized, dolichocephalium carnivore were found dumped in a creek near Colic recently. They had been shot or bludgeoned. We were asked to determine whether these may have been greyhound pups or similar, or whether they were the remains of foxes. The differences between dogs and foxes proved to be rather subtle: Foxes have a small "shelf" on the permanent molar teeth and have a different spatial arrangement of the foot pads. There are also minor differences in the overall shape of the skull and of bones of the orbit.

The above carcasses were foxes.

#### CITRULLINAEMIA IN FRIESIAN CALVES (J. Webber)

Recently, we confirmed the first case of citrullinaemia in the South-west region. Citrullinaemia is a recently recognized lethal inherited defect of Friesians. It is characterized by birth of a healthy calf with development of progressive nervous signs resulting in death at any time from 12 hours to 4-5 days.

This autosomal recessive condition is due to a defect in the urea cycle in which the enzyme argininosuccinate synthetase is defective. This results in a massive build-up of the amino acid L-citrulline and other nitrogenous waste products in body fluids and tissues.

The sire of the above calf was "Glenjoy Starlite Jupiter" (GUPI) whose semen is held at the VAB Centre, Bacchus Harsh. A number of bulls have been found to be carriers of the defect. These include: "Linmack Kriss King", "New Line Kriss Commodore" (NLKC), "Pitcairns Lin Fergie" (FERGY) and possibly "Heybridge Free Enterprise" (HENT).

Diagnosis was based on assay of fixed brain tissue and formalin for citrulline by N.S.W. Dept. of Agriculture's Central Veterinary Laboratory at Glenfield. Best samples for confirmation of this condition are C.S.F. and/or plasma from affected calves. Fixed brain tissue should be submitted for histopathology.

#### FEATHER LOSS IN PEACH FACED LOVE BIRDS (C. Lenghaus)

A commercial aviary has had an ongoing problem of progressive feather loss in Peach Faced Love Birds effecting 1-2% of birds annually. Affected birds lose tail, wing end body feathers and usually die when isolated from flock mates, often with shivering seen terminally.

Most of 10 birds received at Hamilton RVL in April had marked feather loss particularly of body and tail. Intercurrent disease of enteritis and peritonitis was seen in some birds, otherwise, internally the birds were unremarkable.

Histologically there was a diffuse mononuclear infiltration in the dermis, also involving many dermal blood vessels. There were areas with an apparent complete loss of feather follicles, as well as other follicles where there was degeneration of the specialized stratified epithelium from which the feather forms. Degeneration of the epithelium apparently proceeded degeneration of the shaft of the feather, resulting in deformities of the emerging quills.

#### 4.

The above is part of the "Psittacine Beak and Feather Disease" (PBFD) complex, including "French Mould", which has been recognized in numerous species of psittacines (eg. cockatoo, parrot, corella, budgerigar, galah, cockatiel, lorikeet, lovebird, etc.). The disease is not seen in non psittacine birds. Acute, sub-acute and chronic forms of feather disease are described. Progressive beak and claw deformities have also been reported. In acute disease there is necrosis, fracture, bending, bleeding or shedding of normally growing quills following moulting in fledglings or immature birds. Birds do sometimes recover over a period of 6-12 months, and are then able to fly again. Sub acute and chronic forms of disease relate to the rate of symmetrical replacement of normal feathers by dystrophic quills. Often such birds are presented with concurrent disease such as septicaemia, pneumonia or enteritis.

Birds may recover from the intercurrent diseases, however, recovery from the more insidious forms of PBFD is uncommon. These birds are susceptible to hypothermia.

The aetiology is presently uncertain, although both intracytoplasmic and intranuclear inclusion bodies have been reported in epithelial cells from affected feathers and follicles, and aggregates of particles resembling virions have been seen ultrastructurally. Inclusions similar to those reported, were also seen in our material. Two birds kept under observation at the RVL made a complete clinical recovery over a 4 month period.

#### References:

- 1) Pass, D.A. and Perry, R.A. Aust. Vet. J. 61(3):69-74, 1984
- 2) Perry, R.A. and Pass, D.A. Aust. Vet. Poultry Ass. Cage and Aviary Bird Seminar pp 35-38, May 1985.

**SOUTH AUSTRALIA** - Peter Phillips

#### CENTRAL VETERINARY LABORATORIES

#### MYCETOMA-LIKE LESION IN A CAT (Robin Giesecke)

A lump which had developed in the submandibular region of a male cat was biopsied and submitted for histopathology after failing to respond to antibiotic therapy over a three week period. The overlying skin was said to show several wounds.

Microscopically the tissue consisted of lymph node, showing capsular fibrosis, cortical haemorrhage and oedema, lymphoid hyperplasia, extensive neutrophil infiltration and intersecting fibrosis associated with the presence of predominantly eosinophilic 'granules'. The 'granules' showed no ray development and consisted of clusters of strongly Gram positive, unbranched, sometimes beaded, filamentous bacilli. The pyogranulomatous reaction was considered to be the result of infection following soil contamination of the skin wounds.

In cats mycetoma-like lesions have been recorded in infections with Nocardia brasiliensis (Ajello *et al.* 1961) and with Streptomyces griseus (Lewis *et al.* 1972) Reinke *et al.* 1986). As no material was available for culture from this case, the organism could not be positively identified.

#### References:

Ajello L, Walker W W & Dungworth D L (1961) - J Am Vet Med Ass 138 : 370

Lewis G E, Fidler W J, Crumrine, M H (1972) J Am Vet Med Ass 161 : 500

Reinke S I, Ihrke P J, Reinke J D, Stannard A A, Jang S S, Gillette D M & Hallock K W (1986) J Am Vet Med Ass 189 : 446

## 5.

### 'BRUISING' LESIONS IN BACON (Robin Giesecke)

Slices of pickled middle rashers of bacon showing diffuse brownish areas of discolouration in the fat were submitted for histopathology. The lesions were said to be a common finding and often associated with a nipple.

Microscopically the 'bruised' areas were confirmed as islands of mature, well structured acinar tissue lying in normal fat. There was no evidence of haemorrhage or inflammatory reaction. The acinar tissue was considered adventitious mammary gland.

### SUSPECTED PAPOVA-LIKE VIRUS INFECTION IN A CINNAMON LOVE BIRD (Vui Ling Tham)

In July this year a one-year-old female cinnamon love bird (Agapornis spp.) was submitted by an Adelaide metropolitan private veterinary practitioner for necropsy. It was depressed and was off its food for a few days before it was found dead.

Post mortem examination revealed diffuse hyperaemia of carcase and hepatosplenomegaly. Smears prepared from the liver and spleen did not show any Chlamydia elementary body or bacterium.

Historically there was severe multifocal hepatocellular and splenic cell necrosis. Inclusion bodies resembling those of papova-like virus were seen in many hepatocytes, some hepatic sinusoidal lining cells and some splenic cells.

### **WESTERN AUSTRALIA** - David Pass

### MURDOCH UNIVERSITY SCHOOL OF VETERINARY STUDIES

### CRYPTOCOCCOSIS IN A GANG GANG COCKATOO (D. A. Pass)

A mature bird had gross deformity of the upper beak for at least six months. The beak was enlarged overall, soft in parts and soft masses of tissue projected from the left lateral edge. On cut section, all the tissues of the beak (premaxilla, nasal bones, nasal cavity and dermis) were uniformly gelatinous. Masses of Cryptococcus-like organisms were present in sections. This disease is not common in birds.

### AVIAN MYCOBACTERIOSIS (D. A. Pass)

We have seen a number of cases of infection with acid-fast bacteria in cage birds (Gang Gang cockatoo, canaries, finches) in the last two years. Lesions consist of massive infiltrations of bacteria-laden macrophages in many organs with minimal or no necrosis. Although this form of disease is well recognised, we had not seen a case of avian mycobacteriosis in any species until 1986. The disease in poultry in W.A. is uncommon.

### SALINOMYCIN TOXICITY IN A HORSE (Jan Thomas)

At the end of June, an eight month old standardbred colt was presented to the referring vet paretic, and unable to stand (despite repeated efforts). The animal would eat, its cardinal signs were normal and no sensory or proprioceptive deficit could be detected. The animal had been running with two unaffected brood mares. Despite intensive treatment, the animal remained recumbent and over two days, developed severe rectal prolapse and continued to struggle. Skull and cervical radiographs were normal. Haematology and biochemistry were normal, except for an increased CK (22,000  $\mu$ L). The animal was euthanased three days after the onset of clinical signs.

## 6.

Post mortem examination revealed changes through skeletal muscle only. These were diffusely affected which became focally severe in areas. The muscles that were severely affected were epaxial muscles, abdominal muscles, triceps, gluteals and biceps femoris. These had diffuse pallor and yellowing with cores of muscles often haemorrhagic. The distribution was not associated with pressure areas.

Histologically there was widespread segmental damage associated with hyalinisation. disruption of fibres with leakage of cytoplasm, retention cap formation and in individual fibres, there was massive phagocytic infiltration. Areas were completely coagulated with acute fibrinoid necrosis of small arterioles. There was also subacute tubular nephrosis with mild protein leakage in the kidneys and myoglobin pigment was present in epithelial cells. All other tissues, including the heart, were within normal limits.

The degree of subacute segmental myofibrillar lysis is consistent with reports of Sabinomycin toxicity in turkeys, chickens and horses. Renal lesions are also reported in horses. The absence of cardiac lesions conflicts with some reports in horses and cows but there appears to be wide variation in site and severity.

Salinomycin is an ionophore coccidiostat. This horse was kept on a poultry farm and had access to pellets with Salinomycin additives.

Toxic levels for horses start at 128ppm and, whilst this feed was at 60ppm, it is likely that inconsistent levels throughout the feed has occurred. This also helps to explain why the other horses were unaffected. Liver Selenium levels were normal and snake venom detection was negative.

### DEPARTMENT OF AGRICULTURE. PERTH

#### COCCIDIOSIS IN SHEEP (R Peet)

100 of 600 adult rams from a pastoral station being held in a feedlot situation for live sheep export died and the others were apparently sick and scouring. They did not respond to anthelmintic drenching and 2 sick rams were submitted to AHL for post mortem examination. The main features were markedly thickened oedematous caecae and spiral colons with apparent haemorrhagic enteritis in one sheep. Livers were cultured for Salmonella spp with negative results. Histopathology showed numerous coccidial forms in a proliferate enteritis in both sheep. Oocysts were collected from intestinal contents and incubated. They were identified as Elmeria ovinoidalls (ninakahlyakimovae) which is considered highly pathogenic for sheep and goats.

#### SUSPECTED PLEUROPNEUMONIA IN CATTLE (R. Peet)

300 Adult cattle were mustered in an isolated area of the Kimberlys for TB testing. Three died with symptoms of respiratory distress and a fourth animal with similar symptoms was shot and necropsied by the field veterinarian. He described "classical pleuropneumonia" with severe marbling and emphysema of the lungs and chronic pleurisy. The thoracic cavity contained approximately 1 litre of yellow straw-coloured fluid. Clotted blood, pleural fluid, fresh and formalinised lung were submitted to AHL. The serum and pleural fluid proved negative on CFT for M. myecoides as did formalinised lung in the interface precipitin test. No Mycoplasma spp, but Pasteurella multocida and Corynebacterium (Actinomyces) pyogenes were cultured from fresh lung. Histopathology revealed a severe haemorrhagic necrotising pneumonia characterised by marked interstitial oedema with many macrophages and PMNs in alveoli and bronchioles. Numerous bacterial colonies were visible in these areas with some apparent dust and necrotic plant material. Diagnosis: Inhalation pneumonia with severe secondary bacterial invasion.

ALBANY REGIONAL LABORATORYSUPPURATIVE MENINGITIS ASSOCIATED WITH MORAXELLA (Ruth Reuter)

Two 3-4 week old lambs from a flock of 300 exhibited opisthotonus, nystagmus and paddling when stimulated. At necropsy the only gross finding of significance was excessive cloudy fluid in the cranial cavity and haemorrhage over the meninges of the brain and spinal cord. Histology confirmed the presence of an extensive suppurative meningitis. On culture a heavy pure growth of Moraxella non-lignefaciens was obtained. This organism occurs normally in the upper respiratory tract of man, but may become a secondary invader according to Bergey. It has not been associated previously with meningitis in lambs to my knowledge.

BRACKEN FERN POISONING IN CALVES (Ruth Reuter)

Forty 5 month old Angus calves which had been raised on milk replacer were weaned onto a paddock containing mainly young oats interspersed with young shoots of bracken fern (Pteridium aquilina). Six weeks later 3 calves died, and the rest were moved to another older paddock. Shortly after the move, 5 animals died. Necropsy of 2 calves showed excessive serosanguinous fluid in the peritoneal cavity, necrosis of the intestinal wall with large blood clots and debris in the lumen, haemorrhages on the serosa of the bladder and congestion of the other organs. A bone marrow smear made at the time of necropsy revealed thrombocytopaenia. No further losses have occurred.

PERINATAL MORTALITY ASSOCIATED WITH CORYNEBACTERIUM (Ruth Reuter)

A mob of 60 ewes was separated into two groups for mating, with one ram used for each group. After mating, the mob was reassembled in one paddock. Subsequently 12 of the progeny from one of the rams were aborted, stillborn or died from pneumonia in the first 2 weeks of life. No losses occurred in the progeny of the second ram.

Laboratory examination of one of the aborted lambs revealed microscopic lesions of suppurative placentitis and septicemia. A member of the Corynebacteria biochemically similar to C. bovis was isolated from foetal lung and abomasal content.

Two months later the owner decided to dispose of the ram in question although he was clinically normal. On necropsy there was a severe chronic interstitial nephritis, glomerulitis and pyelitis to the left kidney with compensatory hypertrophy of the right kidney.

Corynebacteria have been incriminated previously as a cause of perinatal mortality in lambs (Vet. Rec. (1966) 79:105). It is tempting to speculate that such bacteria could have caused an earlier pyelonephritis in the ram with contamination of the semen or uterus at the time of mating.

PERACUTE NECROTISING MASTITIS IN AN AGED COW (Ruth Reuter)

An eight year old Angus cow was found dead in a paddock consisting primarily of clover with some bracken fern and native scrub along the edge. She had a serosanguinous nasal discharge, oedema of the larynx, an enlarged friable yellow liver and petechial to ecchymotic haemorrhages in the muscles, trachea heart and serosa of the blood vessels. She was not pregnant. On histology the most striking change was severe mastitis characterised by widespread necrosis of ductular epithelium, exudation of fibrin and neutrophils into the duct lumens and adjacent alveoli, thrombosis of small vessels and masses of bacteria in the affected areas. The other organs showed primarily toxic changes. Gram positive cocci typical of Staphylococcus were identified on special stains of the mammary gland sections.

Although peracute staphylococcal mastitis is ordinarily associated with young cows around the time of calving, sporadic cases not associated with parturition have been described.

## 8.

### OTHER CONDITIONS SEEN RECENTLY IN THE LABORATORY INCLUDE:

- \* Feline Leprosy.
- \* An outbreak of strychnine poisoning which killed approximately 40 cats and dogs, and several chickens.
- \* Colitis X in a stallion.
- \* Heavy losses in 2-3 day old broilers associated with chilling/overheating.

### **NORTHERN TERRITORY** - Lorna Melville

#### BERRIMAH AGRICULTURAL LABORATORY (L. Melville)

##### Eumycotic Mycetoma in a Goat

A two year old male goat was submitted for autopsy because of a persistent facial swelling present for about 4 weeks. On examination a large invasive mass replacing bone end soft tissue was found. The mass contained multiple sinuses with granular material. Masses of fungal hyphae were present on special stain, and culture produced a pure growth of Curvularia launata var seria.

During the past two years "black-grain" mycetomas have been seen in a horse and a dog. These lesions were not cultured as they were submitted only as fixed tissue, but were presumably due to a pigmented Curvularia sp. According to Jubb and Kennedy mycetomas are rare in animals, occurring only in the horse and dog and Curvularia geniculata is the only fungus cultured from these lesions.

The present case in the goat was not a pigmented fungus and appeared far more invasive than the previous cases.

##### Melioidosis in goats

Two goats were submitted for autopsy following sudden death. Multiple abscesses in lymph nodes were found from which Pseudomonas pseudomallei was cultured. Serological investigation of the remaining 30 animals revealed two more infected animals.

##### TB serology

Darwin laboratory and field staff are currently assisting the CSIRO Parkville group in field testing the antibody ELISA and gamma interferon assay for detection of TB in animals. Several hundred animals with a TB prevalence of 2%-10% are being tested with full sterile lymph node collection and culture on all reactor animals and abattoir slaughter of the remainder.

#### AZRI ANIMAL HEALTH LABORATORY, ALICE SPRINGS (D. McEwan)

Rickets (P deficiency) was diagnosed in a herd where 60 out of 400 weaner cattle had died after showing poor exercise tolerance, reluctance to move and salivation. On autopsy rib bones were easily bent and the head of the femur could be pared with a knife. Serum CPK were slightly elevated (200-400U/L).

Corynebacterium resembling C. ovis has been isolated from subcutaneous abscesses in a number of camels in the Alice Springs district. Abscesses have been observed developing after TB and blood testing, presumably by contamination of wounds. Healing has occurred following lancing and irrigation of the lesion.



## 9.

Sheep were once prevalent in the region but it would be at least 10 years since the sheep industry ended here. It is possible camels have their own strain of the organism and CSIRO McMaster laboratory is kindly typing the isolate.

Poisoning of dogs(s) by Efudix 5-fluorouracil. An owner found his tube (20 g) of Efudin ointment totally chewed up. Subsequently one of his two dogs died after exhibiting muscle twitching, fitting and vomiting. Stomach contents were negative for strychnine. Liver histology revealed a number of cells with only the outline of the nuclei present.

The second dog developed hysteria and convulsions but recovered slowly over a week with nursing and appropriate therapy (fluids, anticonvulsants). Haematology revealed many degenerating white blood cells. Serum enzyme analyses showed a moderate elevation in ALT (201 U/mL).

A literature search cited a dose of 15 mg/kg/day to be lethal to dogs.

Cassia nemophila poisoning in cattle. Several young cattle succumbed to Cassia sp. poisoning during a dry period. Signs observed were diarrhoea, salivation, weight loss, staggering and aggression/disorientation. Blood samples revealed elevated CPK levels.

**QUEENSLAND** - Fraser Trueman

ANIMAL RESEARCH INSTITUTE (Fraser Trueman)

Infectious Avian Laryngotracheitis (ILT) was isolated from a Warwick property. A total of 600 birds died in a flock of 12,000 over an 8 day period with a further 1000 sick. Cheesy plugs were present in the tracheas with some haemorrhagic areas. Histological examination revealed a moderately severe hyperplasia of the tracheal epithelial cells with loss of cilia. No inclusion bodies were found and no virus seen on electron microscopic examination. However, ILT virus was isolated from all 8 tracheas submitted and an ILT ELISA recorded 6 positive scores out of 7 tracheas examined.

Vitamin A Deficiency was found in a flock of 30 birds at Roma where there had been intermittent deaths which at first was thought to be coccidiosis, for which they had received treatment. Four were dead from this group with a further 3 sick. Post mortem examination revealed lesions typical of Vitamin A deficiency with pustules present in the upper oesophagus and conjunctivitis. Histological examination showed squamous metaplasia of the mucous secreting cells in the oesophagus with stratified, keratinized epithelial cells. Biochemical analysis of the liver also showed the bird to be Vitamin A deficient. The previous infection with the coccidia may have reduced liver stores of Vitamin A (studies have shown levels may be depleted to 10% of normal). Alternatively, a chronic Vitamin A deficiency may have caused increased susceptibility to coccidial infection.

Copper Deficiency

Posterior ataxia and convulsions occurred in a group of 4-month-old pigs fed an unbalanced diet (bread from a bakery). A pig examined at the laboratory had pneumonia and urinary tract infection which was considered secondary to malnutrition. The liver copper level was deficient (8 mgm/Kg) and Wallerian degeneration was present in lumbar spinal cord.

Yersiniosis was considered as the cause of 10 deaths and several sick deer in a group of 200 weaned Rusa and Red stags. Symptoms included severe scouring, normal temperature, dehydration and death within 3 to 4 days. Necropsy revealed a severe enteritis involving the terminal portion of the small intestine, and less severe in the caecum and large intestine. Microabscesses were present in the liver of one animal, and Yersinia pseudotuberculosis was isolated from a mesenteric lymph node.

## 10.

Gossypol toxicity was suspected at Roma. Eight animals died out of a group of 320 6-month-old Herefords that had been yarded for weaning. They had been fed cotton seed and oaten hay from troughs for approximately 10 days when the problem commenced. Clinical signs were sudden death or depression with signs of abdominal pain and death within 24 hours. At autopsy there was severe reddening of the mucosa of the abomasum, intestines and related lymph nodes. Suitable histological material was received from 2 animals and in both hearts there was focal necrosis of muscle fibres progressing to inflammatory infiltration mainly by macrophages and lymphocytes. Pathological findings were not considered typical of gossypol toxicity because of the absence of the expected centrilobular necrosis. However the heart lesion was consistent and in the absence of other likely causes of cardiac necrosis the cotton seed appeared to be involved, particularly as losses ceased after it was withdrawn from the ration. A 1% level of gossypol was detected in the cottonseed and this was probably high enough to cause toxicity .

Poisoning due to ergot of paspalum was diagnosed at Grandchester. Approximately half of a group of 40 Braford cows and calves were affected to varying degrees during April and May. Clinical signs were ataxia with goose-stepping in front and short-stepping behind or severe tremor of the body with ataxia and wildly flapping ears. No field deaths occurred and autopsy of an affected animal revealed no significant change; there was, however, a lot of Paspalum seeds in the rumen. The affected animals were in one paddock that was all flat, containing mainly Paspalum as well as a lot of scotch thistle and some swamp foxtail, Rhodes grass and bluegrass. The Paspalum seed heads were heavily infested with black fungus, so much so that blackening of the faces of horses was noticed. Cattle in neighbouring paddocks were not affected but these paddocks contained some ridges and less Paspalum. The sick animals recovered when they were removed from the paddock.

### REPORTS FROM OVERSEAS

#### NATIONAL. VETERINARY LABORATORY PAPUA NEW GUINEA

##### RUNTING AND STUNTING SYNDROME (Les Sims and Mike Nunn)

Runting and stunting syndrome as described in Australia had not been seen in chickens in Papua New Guinea until mid-way through 1987. It is now present on 2 of the three large broiler farms in the country. Clinically, the disease was characterised by high mortality in the second week of life (up to 3% in some cases) and large numbers of runted birds resulting in high culling rates with many of these birds displaying retarded feathering. By the end of the second week the sheds in which the condition was occurring contained very uneven birds with up to 15% of the birds visibly smaller than the rest of the birds in the shed.

On post mortem examination the main lesions seen were a reduction in the size of the bursa, thymus and pancreas, with the thymus being the most consistently affected organ. Histologically, there was marked vacuolation of the pancreas with loss of basophilia of acinocytes and dilation of acinar lumina. In the thymus the main change was a reduction in the number of thymocytes in the cortex, which was reduced to a thin rim around the medulla. Similarly the lesion in the bursa was characterised by a reduction of lymphocytes in bursal follicles. Diagnosis was based on the clinical and pathological findings.

##### CRYPTOCOCCOSIS IN A CUSCUS

A cuscus (*Phalanger* sp) housed at the National Museum fed on a mixture of fruits, leaves and vegetables, developed diarrhoea and bilateral cataracts. Despite treatment, the condition of the animal continued to deteriorate and after about 2 weeks it died. No significant pathogens were isolated from faecal samples.

The most striking lesion found in the cuscus was a markedly enlarged mesenteric lymph node (approx. 3cm diameter) which on microscopic examination contained numerous capsulated yeasts resembling *Cryptococcus*. Whether this was an incidental finding in an immunocompromised animal or the cause of the animal's death remains open to speculation.

11.

Cataracts are commonly seen in captive cuscus and may be related to galactose intolerance as in other marsupials.

**DIARY DATES**

1988

**FEBRUARY**

15-19 S.V.P.G.F. Refresher Course on Fauna Stephen Roberts Lecture Theatre University of Sydney.

**MAY**

9-13 Australian Society for Microbiology - Annual Conference Canberra.

14-15 A.S.V.P. Conference & A.G.M. Ian Clunies Ross Lecture Theatre School of Veterinary Science University of Sydney.

16-20 A.N.Z.A.A.S. Centenary Conference University of Sydney.

18-22 A.V.A. Conference & A.G.M. Canberra.

23-27 S.V.P.G.F. Refresher Course on Fish Diseases Stephen Roberts Lecture Theatre University of Sydney.

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### JOB LINE

#### Clinical Pathology Instructorship

The Department of Microbiology, Pathology and Parasitology at North Carolina State University, School of Veterinary Medicine has a position immediately available in clinical pathology appropriate for an individual who has completed formal training and seeks an additional year of experience in preparation for the clinical pathology board examination of the American College of Veterinary Pathologists. The position involves a half-time commitment to teaching and service work in the clinical laboratory with the remaining time free for self improvement. Service work will involve interpretation of cytology and haematology slides, general laboratory management, and consultation with clinicians and students. Teaching responsibility for a senior student laboratory course and sophomore lecture/laboratory course will be shared with the department's two other clinical pathologists. Applicants should send a letter of interest and goals, curriculum vitae and three letters of reference to Dr. Jerry Stevens, Department of Microbiology, Pathology and Parasitology, North Carolina State University, School of Veterinary Medicine, Raleigh, North Carolina 27606.

Application closing date - November 1, 1987 - or until a suitable candidate is chosen.

North Carolina State University is an equal opportunity/affirmative action employer.

#### Veterinary Pathologist Seeking Position

Dr. A.C. Bandopadhyab MRCVS. PhD., currently Senior Lecturer in Veterinary Medicine at the University of Maiduguri in Nigeria, seeks a position in veterinary pathology. His curriculum vitae and references are being held by Dr. Peter Phillips (08 -228 7537) if anyone is interested in employing Dr. Bandopadhyab