THE VETERINARY PATHOLOGY REPORT

Australian Society for Veterinary Pathology
Brought to you by:
The Department of Primary Industry, Tasmania,
Mt. Pleasant Laboratories,
P.O.Box 46, Kings Meadows, TAS. 7249.

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DEADLINE FOR NEXT VET. PATH. REPORT IS SEPTEMBER 8

PRESIDENT'S PAGE

Congratulations to Bill Hartley on being conferred with Life Membership of the Society, a richly deserved honour and a small reward for the massive effort that Bill has put into Veterinary Pathology and building up Registries in New Zealand and Australia.

At Mt. Pleasant, we are looking forward to hosting you for the Scientific Meeting and AGM on 28-29 Jan 1990. The theme will be Fish Pathology and will follow on directly from the Post Graduate Course in Fish Diseases on Jan 26-28. We have secured Jeremy Langdon, Barry Munday and Judith Handlinger, all experts in fish diseases as seminar leaders. The combined program will make it easier to justify attendance and provides a first rate opportunity to get the latest information on fish diseases. GET ORGANISED.

It is heartening to see Veterinary Pathology Laboratories responding to pressures on public funding. The emergence of private veterinary pathology laboratories is welcomed. I recently visited Richard Miller at Veterinary Pathology Services in Brisbane to see at first hand the service his laboratory is providing to his clients. Local veterinary practitioners in Brisbane were very happy with the service. Our colleagues in New Zealand have responded dramatically (to survive!). The Ruakura Animal Health Laboratory modus operandi is a lot different from 5 years ago, with several practices linked by fax to the lab. Vetlab in South Australia has responded by a 7 day a week service and extended hours.

There are a few examples of how veterinary pathology labs and pathologists are responding to changing circumstances.

It is a mistake to assume the Vet Pathology's traditional activities will always justify public funding. There are so many competing interests e.g. soil conservation, residues, animal welfare. However, if Veterinary Pathology is seen as a range of skills which can be applied to problems and situations, there are good opportunities for Veterinary Pathology e.g. fish diseases. See you in Launceston Jan 26-29th next year.

{Rod Oliver)
PRESIDENT, (ASVP)

SECRETARY'S REPORT

Life Membership

Dr. W J Hartley has been granted Life Membership of the ASVP in recognition of his long and outstanding service to veterinary pathology,

New financial year and Subscriptions

The ASVP financial year has been changed to coincide with the calendar year. As from 1st January 1990 the annual subscription fee will increase to twenty dollars ($20.00). However, the annual subscription for this year remains at twelve dollars fifty cents ($12.50) until 31st December 1989.

National Training Scheme for Veterinary Pathology

Tony Ross and (Bill Hartley/Keith Walker) will represent the ASVP on a joint sub-committee of ASVP and the Pathobiology Chapter of ACVS to explore the feasibility of a National Training Programme in Veterinary Pathology.

EDITOR'S REPORT

This is your first **Vet. Path. Report** coming to you from Tasmania. To start with I would like to thank Robin Giesecke, the previous editor, for her contributions in making this report a worthwhile publication for all veterinary pathologists.

Secondly I wish to apologise for the late publication of this report. The number and quality of contributions submitted to the Vet. Path. Report is particularly gratifying. This issue is no exception with articles covering a broad range of vertebrate pathology and a diversity of topics. We intend producing an index of Vet. Path. Report articles annually. An index of all previous issues is also being prepared by Robin Giesecke.

It has been decided to charge for Jobline Professional Position Vacancies. Minimum charge will be $Aust 25.00, half page advertisements will cost $Aust 50,00 and full page ads. $Aust l00.00.

David McGavin has provided the ASVP with a publication called 'Training Programs in Pathology and Clinical Pathology in North American Colleges and Schools of Veterinary Medicine 1988-1989. This publication has been prepared by the heads of departments of veterinary pathology institutions throughout North America. If anyone is interested in seeing this publication, please write to David Obendorf, Mt. Pleasant Labs. P.O. Box 46, Kings Meadows, Tas. 7249.

If any members have comments or suggestions to make about the report format or content please write to me.

David L. Obendorf
Hon. Editor

CONFERENCE UPDATE

AGM/SCIENTIFIC MEETING
LAUNCESTON TASMANIA
28-29 January 1990

The theme of the ASVP scientific programme will be Fish Pathology. This programme will run back-to-back with the Post Graduate Committee in Veterinary Science - Tasmanian State Institute of Technology (PGCVS - TSIT) Fish Disease Workshop. The PGCVS - TSIT Workshop will be held at the National Key Centre in Aquaculture at the TSIT in Launceston on the 26, 27 & 28 January 1990.

The ASVP Fish Pathology programme will complement the PGCVS TSIT Fish Diseases Workshop. For those with any interest at all in fish disease or fish pathology, these two meetings are a **MUST**.

The provisional ASVP Pathology Programme is :

SUNDAY	PM	Pathology of gills	Dr. J Langdon
		Pathology of integument	Dr. J Langdon
		ASVP AGM	
		Sunday evening ASVP Social Function	
MONDAY	AM	Inflammatory and Immune Response	Dr. J Handlinger
		Central Nervous System and Muscle	Dr. B L Munday
		Case reports (mammalian, avian, fish etc.)	
	PM	Lunch	
		Case reports (mammalian, avian, fish etc.)	
		Conclusion of meeting 3PM, 29th January 1990.	

PRELIMINARY ARRANGEMENTS JANUARY 1990 MEETING

ACCOMMODATION

Bed and breakfast accommodation will be available at the TSIT halls of residence. The cost will be approximately twenty eight dollars ($28.00) per person per night. Transport for those without it will be arranged to get members to Mt. Pleasant on the Sunday.

SOCIAL FUNCTION

A booking has been made at a Tamar riverside country pub for a smorgasbord fare including Tasmanian seafoods etc. The pub serves four pub brewed beers as well as commercial beers and wines etc.

The cost for the social function will be about thirty five dollars ($35.00).

Transport to and from the social venue will be arranged.

GETTING HERE

Fly/Drive packages are an economical way of getting to and around Tasmania. Country hotels offer good accommodation at reasonable rates.

FISH WORKSHOP

DOUBLE VALUE

Why not enrol in the PGCVS Fish Workshop. This workshop immediately precedes the ASVP programme and both use the same accommodation venue (TSIT halls of residence).

STATE REPORTS

NEW SOUTH WALES Jim Rothwell

REGIONAL VETERINARY LABORATORY, ORANGE

TICK FEVER (J. Seaman)

One of the major diseases diagnosed during autumn was an outbreak of Tick Fever (Babesiosis) causing the death of 14 adult cattle on a property at Yeoval. Two submissions from the property received in late March/early April showed evidence of an acute haemolytic episode with jaundice, splenic haemosiderosis and haemoglobinuric nephrosis but it wasn't until after a property visit by Ray Webb and Veterinary Inspector, Molong on 4th April that the diagnosis was established. A tick collected during the visit was identified as Boophilus microplus and impression smears of kidney from an animal necropsied were positive for Babesia sp. These results were confirmed by staff at the Regional Veterinary Laboratory, Wollongbar on 6th April and also supported by histological changes.

The diagnosis had severe repercussions, as cattle tick in New South Wales are not found outside the Tick Quarantine Area in the north-eastern corner and even there, Tick Fever is very rare. The disease was handled as an exotic outbreak with a Task Force established at Orange, staff mobilised from throughout the State and experts called in from Lismore and Queensland to assist with technical matters and policy.

Detective work by the Director of Veterinary Services at Orange, Steve Ottaway, established that an illegal movement of Cattle Tick infested calves, from Rockhampton in Queensland to Yeoval, occurred back in October 1988. Considerable movement tracings and inspections found ticks on a further 3 properties (2 of which had also bought calves introduced from Queensland and the third a neighbour of the original infected property). Ticks were also found on sheep on the original infected property but there was good evidence that most sheep were rejecting the tick infestations. The role of feral goats in the area further complicated the exercise but no ticks were found on goats examined.

As of early June, 65 properties in the Yeoval area are in quarantine involving some 3500 cattle and 115,000 sheep. Extra staff have been employed to supervise treatments/inspections and movements. Owner co-operation has been excellent and with the continued commitment of all involved, release from quarantine should occur about April next year. A conservative estimate of the direct cost of the outbreak has been put at $200,000.

FOOTROT AND PARASITES IN SHEEP

The major economic diseases of footrot and internal parasites in sheep have resulted in an increase in laboratory submissions in recent months. The continued wet weather and relatively mild temperatures throughout autumn have been ideal for both conditions. For example, during May, 47 submissions were received at Orange for footrot examination with the disease being diagnosed in many "non-footrot areas" such as Trundle, Tullamore and Quandialla. Parasite problems including outbreaks of anaemia and deaths associated with Haemonchosis were also recorded during May, unusual for the Orange area as Haemonchus are rarely a problem even in summer.

Other significant diseases in sheep seen over autumn include Johne's Disease on another 2 new properties; Salmonellosis causing the death of 200 weaners, sheep had been stressed following yarding for crutching and recent flooding; Phalaris toxicity including the death of 100 Merino weaners on one property, Chronic Copper Poisoning - mainly associated with Heliotrope and Ixiolaena poisoning from the Western Division.

STAFF

Ray Webb has been offered the position of team leader for the Eastern Islands Veterinary Service project in Indonesia. This is an aid project sponsored by the Australian International Development Assistance Bureau (AIDAB) set up to improve the rural living standards, nutrition and health of the people of the Eastern Islands, stretching from Bali to West Timor. The appointment is for a minimum of 2 years, commencing on 1st July. John Seaman has been appointed as permanent Officer in Charge, Regional Veterinary Laboratory, Orange.

REGIONAL VETERINARY LABORATORY WAGGA WAGGA (John Glastonbury)

CATTLE

Abortion/Parturient Deaths

During autumn we received 240 serums from 29 farms for investigations of isolated cases of abortion/parturient death. Titres >30 were obtained in the microscopic agglutination test for Leptospiral. hardjo in 105 serums from 16 farms while 16 serums from 5 farms yielded similar results for L. pomona. All samples were negative in the ELISA test for Brucella abortus.

Sporadic Bovine Encephalomyelitis

A 2-month-old Shorthorn calf was submitted from a farm which had experienced a number of deaths during 1988. Pyrexia, depression and a bilateral nasal discharge had been observed in the affected animal for one week. Postmortem examination revealed generalised fibrinous serositis and fluorescent antibody stained smears of the fibrinous exudate and the buffy coat showed bodies with a morphology consistent with Chlamydia spp. Multifocal necrotising to granulomatous meningoencephalitis was detected histologically. Interestingly this animal gave a negative reaction in the complement fixation test for Chlamydia spp.

SHEEP

Footrot

With the gradual introduction of the NSW Strategic Plan for Footrot awareness of this disease throughout the Region has increased considerably. This is evidenced by the laboratory receiving 340 smears from 89 farms for confirmation of the presence of Bacteroides nodosus during the autumn period. Organisms with a morphology consistent with B. nodosus were detected in 133 of the smears.

During the same period 19 virulence estimations were performed. Virulent isolates of B. nodosus were obtained from 7 farms, intermediate from 9, benign from 6 and investigations on 5 farms were negative.

Internal Parasitism

The increasing prevalence of anthelmintic resistance has led to an upsurge in requests for laboratory support in investigations into internal parasitism.

During autumn we perfomed:

- Faecal egg counts 3787
- Faecal egg count reduction trials 28
- Larval cultures 166.

Haemonchosis. This condition which is relatively unusual in this Region was diagnosed on 6 farms during May. The diagnosis was based upon faecal egg counts and larval differentiation on 3, whereas total worm counts and postmortem examinations were performed on animals from the other 3. In the second group of farms the morbidity rates varied from 9.7 to 30% and the subsequent case fatality rates were 16.6 to 31.8%. Total worm counts found up to 28,000 Haemonchus oontortus and in 3 cases severe periacinar hepatocyte necrosis suggestive of anaemia was found.

Urea Toxicity

A mortality rate of 1.4% (1400) amongst 5-year-old Merino ewes occurred after the mob gained access to an area over which had been spilt a bag of urea. Histological examination of material submitted to the laboratory revealed cerebral and pulmonary oedema as well as serous hepatitis.

PIGS

Postweaning Enteritis

In a large district piggery 75% of 1,600, 6 to 8 week-old pigs developed a "porridge-like" diarrhoea and grew poorly. The subsequent case fatality rate was 2.5%. Six pigs were submitted for postmortem examination and gross findings were generally unremarkable. Bacteriological culture of various intestinal sites yielded an abnormal flora with a preponderance of faecal streptococci. Coccidial forms were observed in wet preparations from 1 animal, a Salmonella spp. was recovered from the intestinal contents of another and numerous spirochaetes were observed in smears prepared from the large intestinal mucosae of 3. All cultures for Treponem hyodysenteriae were negative as were the virological examinations. Very mild chronic necrotic enteritis, colitis and typhlitis were observed in each of the animals. Unfortunately an aetiological diagnosis still eludes us.

Pityriasis Rosea

Generalised multifocal skin lesions were observed in 8-week-old pigs. The above diagnosis was indicated by the histological findings of the orthokeratotic hyperkeratosis, acanthosis, vesicles and pustules in the epidermis and infiltration of the dermis with mononuclear leucocytes and eosinophils.

HORSES

Equine Viral Arteritis

Two imported Standardbred stallions on different studs were found to be positive serologically for EVA virus which could not be cultured from their semen. Between October 1988 and January 1989 they were mated to 5 and 6 mares, respectively. All mares subsequently yielded titres of between 1:48 and >1:128 in the serum neutralisation test for EVA

NORTHERN TERRITORY Lorna Melville

ARID ZONE RESEARCH INSTITUTE, ALICE SPRINGS

ADONIS ANNUA TOXICITY IN HORSES (D. McEwan)

A number of station horses suffered a severe gastroenteritis after consuming meadow hay containing 30% Adoni.a annua (Pheasant's eye). Signs noted were depression, colic, dehydration and anorexia. Most horses took several days to recover. Interestingly, 2 racehorses from the establishment went down with colic shortly after exercise and died within 12 hours. Post mortem findings were massively distended gaseous GIT and pulmonary oedema. It could not be shown that these horses had been fed Adonis annua.

MEAT INSPECTION OF CAMELS (D. McEwan)

Recently 10 caught wild camels were processed through the local abattoirs to provide specialty camel meat for the tourist trade. The opportunity was taken to check the animals for parasites. A careful search was made of the ligimentum nuchae and head and neck areas for Onchocerca nodules. Heads were also examined for nasal bot (Cephalopsis titillator infestation. Oesophagi were checked for sarcocysts (macro and microscopic forms). Whole intestinal tracts were taken from 4 animals for total worm counts.

Results:

- several with nasal bots (attached in the nasopharyngeal region)
- microscopic sarcocysts present {still being identified)
- no tract of Onchocerca
- total worm count not completed but are very low (all camels were nature).

Other findings:

- all were female and all were pregnant
- bronchial and mediastinal nodes were quite large compared with cattle, while those of the herd were small compared cattle.
- 2 had Corynebacteria ovis abcesses of the prescapular lymph node
- 1 had mineralisation of the pharyngeal glands.

MYCOBACTERIAL ABCESS IN A MALA WALLABY (LAGORCHESTES HIRSUTUS)
(D. Me Ewan)

A captive female mala was presented with a subcutaneous lump. On section this lump contained whitish creamy pus. On ZN stain there were masses of long acid fast bacteria. Culture are still in progress. A mycobacterium typed as MAIS was isolated from a previous case in this colony.

QUEENSLAND Fraser Trueman

ANIMAL REASEARCH INSTITUTE - YEERONGPILLY

SYSTEMIC PROTOZOAN INFECTION IN FISH

Thirty of 60 Dwarf Gourami imported from Singapore had died by the thirteenth day of quarantine. Six were initially examined at the laboratory. Another four were sampled for further study. Histologically, a marked enteritis and moderate peritonitis were present. In distal parts of the intestine there was mucosal sloughing and necrosis and inflammation of the submucosa. Numerous large protozoan-like organisms, with basophilic cytoplasms containing erythrocyte debris, were associated with intestinal and peritoneal changes. Protozoan-like organisms were present in kidney haematopoietic tissues, and on atrial and ventricular endocardium. In high numbers. The organism was also apparent in hepatic sinusoids, gill filament sub-epithelial connective tissue, eye choroid gland and various loose connective tissues throughout the body. Resampling for stained smear preparations of intestinal and kidney tissue, and electron microscopy failed to identify the protozoan-like organism. Histology showed a much reduced intensity of infection in this group. The remaining fish in the shipment were destroyed.

Mycobacteriosis in redclaw crayfish, Cherax quadricarinatus and yabby, Cherax destructor

Four redclaw crayfish from a tertiary education institute were examined at the laboratory. They were presented as healthy specimens, but all had small melanised foci in uropods, antennae and cephalothoracic and abdominal cuticle. They were from a population of several hundred crayfish maintained in two small recirculation systems for growth and nutrition studies. An extensive granulomatous response was present in connective tissues throughout all four crayfish. Melanised granulomas were most common in gill branches and filaments, subcuticular connective tissue and hepatopancreatic interstitial tissues. Numerous acid-fast bacteria were present in the granulomas and hypertrophied haemocytes. A single yabby, maintained in an aquarium in the same room as the recirculating systems, was examined. A similar systemic granulomatous response was observed. From thoracic connective tissue, Mycobacterium chelonei was isolated and identified. Re-infection studies are planned to confirm the aetiology and pathogenesis.

VICTORIA David Williams

REGIONAL VETERINARY LABORATORY BENALLA

PORCINE STILLBIRTHS AMD NEONATAL DEATHS ASSOCIATED WITH NOCARDIA INFECTION (John Mackie)

In a group of farrowing sows which had access to a paddock containing a wallow, five sows gave birth to stillborn or low viability piglets over a period of two weeks. Only one piglet survived out of five litters. The sows were depressed before parturition and had a vaginal discharge after parturition. On necropsy of three stillborn piglets from separate litters, there was consolidation of the lungs. Histologically, there was a severe, diffuse, granulomatous alveolitis, and branching, filamentous, gram-positive bacteria were present throughout the lung tissue. Nocardia sp. were isolated from the lung tissue of three piglets.

The sows were moved to a different paddock and there was a marked decrease In the number of periparturient deaths. Nocardia sp. infection of the foetus may have resulted from soil contamination of the vulva and vagina during wallowing. Porcine abortion due to Nocardia asteroides has been reported in Australia (Mason et al 1981).

References:
Mason R. W., Orchard V., Corbould A. and Stewart L. (1981) Aust. Vet. J. 57 : 398.

FUNGAL MASTITIS IN A PRIMIPAROUS GOAT (Malcolm Lancaster)

A young Saanen doe bagged up as expected but failed to kid when due. On veterinary inspection she was declared non-pregnant, and milk samples were collected for microbial culture as one side of the udder was firm and lumpy.

Pseudoallescheria bovdii., an ascomycete that has been obtained from human cases of eumycotic mycetoma, was isolated from both sides of the udder. Euthanasia was recommended, and the goat was necropsied. On histological examination, a nodule containing fungal hyphae was found protruding into the right milk cistern. The hyphae were imbedded in an eosinophilc matrix, shaped into clubs at the periphery by accumulated neutrophils. Macrophages and fibrous tissue surrounded this complex.

VETERINARY RESEARCH INSTITUTE PARKVILLE

SENDAI VIRUS INFECTION IN A MOUSE COLONY (D. Williams)

A colony of nine Swiss breeding female mice and 100 ten-day old offspring were involved in a disease outbreak characterized by shivering and dyspnoea, one week after the introduction of a young breeding female into the colony.

Initial mortality was 50%, survivors were tachypenic and many subsequently died of Pasteurella broncho-pneumonia.

Histological findings in lung tissue of affected animals surviving 3 weeks after the acute outbreak included adenomatosis, squamous metaplasia of bronchiolar epithelium and lymphocytic focal aggregation in sub-epithelial bronchiolar or septal sites.

A provisional diagnosis of Sendai virus infection was made. This was confirmed by HI serology.

NOSEMATOSIS IN A RABBIT COLONY (Mike Forsyth)

A recumbent twelve-week old female rabbit (Oryctolagus cuniculus), was received from a colony known to be infected with the microsporidian intracellular parasite Encepha1itozoon cuniculi.

The kidneys were enlarged with small white foci prominent within the cortex. The lungs were heavy and congested.

Histologically there was an interstitial nephritis with large numbers of gram-positive trophozoites within the necrotic centres of granulomas scattered throughout the renal cortex and within cells of the tubule epithelium. There was a non-suppurative meningitis with extensive perivascular cuffing and interstitial pneumonia. Trophozoites were found within granulomas or lymphocytic foci in the brain and lung.

Nosematosis is endemic in many rabbit colonies but rarely causes clinical signs.

REGIONAL VETERINARY LABORATORY BENDIGO

BARBER'S POLE WORM IN NORTHERN VICTORIA (R. T. Jones)

Haemonchosis is rarely diagnosed in sheep at Bend1go. This year is an exception, with four separate cases in May. Barber's pole worm is generally found only in East Gippsland, areas north and north-east of Melbourne, coastal regions and the far western areas of the Western District.

The reason for the infestation this year is the wet summer (early autumn break and very warm) conditions. In our area, the usually hot summer is enough to stop the build-up of the worms. This year, consistent rain has enabled the worm to increase in sufficient numbers to cause disease. One case of haemonchosis was complicated by E. ovis infection.

FELINE T-LYMPHOTROPHIC VIRUS ASSOCIATED DISEASES (J. Lee)

Similarly to HIV in humans, FTLV associated immunodeficiency in cats predisposes to a wide range of parasitic and other diseases.

Two recent cases include:

Case 1:
An 11 year old speyed female Siamese cat. Clinical signs included chronic weight loss, calcinosis circumscripta, polyuria, polydipsia, severe anaemia and depression.

Haematology indicated a severe regenerative, probably haemolytic, anaemia with polychromasia, anisocytosis and macrocytosis. Increases in amylase, AST and ALT were probably secondary to hypoxic necrosis of visceral organs.

On postmortem examination the cat was anaemic, jaundiced with an orange coloured fibrotic liver, active bone marrow, pulmonary oedema and mottled kidneys.

Histologically, the liver showed hepatocellular fatty degeneration, bilary retention and extra medullary erythropoiesis. Kidneys showed cortical interstitial nephritis, lungs were oedematous with peribronchial lymphoid accumulation and the bone marrow showed active erythropoiesis.

The cat was FTLV ELISA positive.

Examination of a blood smear revealed polychromatic erythrocytes with many showing multiple smal1 intra-membranous organisms arranged singly or in chains and which stained blue with Giemsa.

The diagnosis was Haemobartonella felis.

Case 2:
A 10 year old castrated male Siamese cat presented with weight loss over two to three months progressing to emaciation and dehydration. He had been anorexic for two to three days and had chronic gingivitis. The cat was anaemic and clotting time was extended.

The most striking feature of the haematology was a very low WCC with neutropaenia, lymphopaenia and marked monocytosis. This, together with a low A/G ratio suggested a chronic inflammatory disease, possibly of the liver (ALT) or kidneys (elevated urea and amylase} with toxic or viral bone marrow suppression.

The cat was FTLV ELISA positive. Prognosis was poor.

These cases illustrate the generalised debilitation and frequent infection by opportunistic pathogens which occurs as a sequel to immunodepression produced by FTLV infection.

CRYPTOCOCCOSIS IN CATS (J. Lee)

Two recent cases of Cryptococcosis include:

Case 1:
A three year old female Chinchilla cat was presented with enlarged peripheral lymph nodes and chronic weight loss. The cat failed to respond to antibiotic and supportive therapy and a provisional diagnosis of FeLV induced lymphosarcoma was made.

However, the cat was both FeLV and FTLV negative when tested using ELISA kits.

A submandibular lymph node was biopsied for histopathology. The lymph node had been almost totally replaced by foamy looking chronic granulation tissue. This appearance was due to an extremely large number of pale blue staining, large, budding, encapsulated yeasts, some of which were contained in macrophages. These stained positively with mucicarmine and alcian blue and the organisms were identified as Cryptococcus neoformans.

The cat was treated with Ketoconazole BID but had developed nervous signs including unilateral loss of the pupillary light reflex, and died after three days of treatment.

Case 2:
A one year old female Siamese cat was presented with a chronic nasal swelling and unilateral purulent discharge.

Samples of discharge and a needle biopsy were submitted for bacteriology and histopathology while blood was submitted for haematology and biochemistry.

Biochemistry showed elevation of ALT and amylase which may have been secondary to hypoxia due to a normocytic normochromic anaemia. WCC was slightly elevated with a neutrophi1ia.

Histology showed that both the mucopurulent discharge and the needle aspirate contained many large, pale staining, budding encapsulated yeasts. Similar yeasts grew after 48hrs at 30ºC on Sabouraud's media but these produced little to no capsules. Growth characteristic and morphology enabled these yeasts to be classified as Cryptococcus neoformans and treatment with Fluconizole or Ketoconazole was recommended.

FeLV and FTLV serology was negative.

Cryptococcus neoformans is a yeast with both a saprophytic soil borne phase and an opportunistic pathogenic phase. It may enter the body via the respiratory system or through skin abrasions when conditions are favourable. In humans, the infection usually spreads haematogenously from the lungs to the CNS, but in domestic animals, skin infections, particularly on the nose and face are common as are infections of the upper respiratory tract

Systemic Infections may be multicentric involving visceral organs as well as CHS for which the organism has a predilection.

Infection is frequently associated with immune-deficient states and so it is surprising that both of the above cats were negative for both FeLV and FTLV.

REGIONAL VETERINARY LABORATORY BAIRNSDALE

FACIAL ECZEMA (Ian Jerrett, Peter Mitchell)

Photosensitisation associated with hepatic damage has been diagnosed on over 60 Gippsland properties in the last 3 months. Most cases have been reported from cattle but sheep have also been affected. Levels of both gama-glutamyl transferase and glutamate dehydrogenase have been markedly elevated, with levels of both enzymes frequently exceeding 1000 u/1.

Pithomyces chartarum spore counts have been performed on many properties; most have had one or more paddocks with counts exceeding 100,000 spores/g (normally < 10,000 spores/g),

Morbidity has varied from 1-20%, but herd enzyme profiles have revealed much wider subclinical hepatic damage. Mortality has been low despite the startling biochemical evidence of hepatic damage. The few cases autopsied have shown mild jaundice, an increased reticular pattern in the liver and variable gall bladder ulceration. Bile ductule proliferation, portal fibrosis and mild mononuclear cell infiltration of the portal trials have been found on microscopic examination.

SALMONELLOSIS IN A CAT COLONY (Ian Jerrett, Rob Seller)

Approximately 25% of kittens purchased at 6-8 weeks of age for a cat colony (funded project) at RVL Bairnsdale died after a short period of weakness and pallor, 1-2 weeks after purchase. Autopsies have consistently revealed marked enlargement of the mesenteric lymph nodes, moderate congestion and enlargement of the liver and spleen, and intense congestion and haemorrhage of the renal cortex in some kittens.

Salmonella typhimurium has been isolated from all tissues in the dead kittens, and from the faeces of affected and normal kittens.

Microscopic lesions include severe necrosis of lymphoid tissue in Peyer's patches, mesenteric lymph nodes and spleen, and thrombosis of vessels in the spleen and also in the lung and renal cortex. Neither enteritis nor diarrhoea has occurred in any of the kittens. Haematological findings of profound, non-regenerative anaemia, leucopenia and thrombocytopenia have been present in many of the affected kittens. Sections of bone marrow have shown reduced erythroid activity, although prominent myeloid activity and many megakaryocytes have been present. Test for parvovirus antigen have been negative in all but one kitten. It now appears that kittens may have been infected in a pet shop used as one source of animals.

JOHNE'S DISEASE IN A COOPWORTH EWE (Ian Jerrett)

One of 15 3-4 year old Coopworth ewes was noticed to be thin when shorn approximately 10 months after being purchased from Flinders Island, Tasmania. The ewe continued to lose condition and showed mild diarrhoea for the following 5 weeks, after which it was submitted for autopsy.

Gross examination revealed thickening of the ileal mucosa with transverse ridge formation. There was prominence of lymphatics over the serosa of the ileum, caecum and spiral colon, and the ileo-caecal and mesenteric lymph nodes were enlarged. Microscopic examination revealed epithelioid and giant cells in the ileal and colonic mucosa and in the ileo-caecal lymph node. Massive numbers of acid-fast bacilli were present. This is the first confirmed field case of ovine Johne's disease in Victoria. The sheep had not had any known contact with Victorian cattle. (Editor's note: Initial investigations on the property of origin have commenced. No serological evidence of Johne's disease has been detected in aged sheep.)

WATER DEPRIVATION/SALT POISONING IN CAPTURED FERAL PIGS (Ian Jerret)

A 1itter of 5 feral piglets approximately 8 weeks old were trapped in a government programme to reduce feral pig numbers in a peninsular national park. The piglets were placed in open pens on an officer's property for fattening. Two weeks after capture, 2 were found dead and the other 3 were shaking and convulsing. Microscopic examination of the brain revealed lamina cortical necrosis and eosinophil cuffing of cerebral and meningeal vessels. The piglets had access to water troughs from the time of capture and were fed vegetable scraps, pig cubes and milk replacer. Water was removed for 24 hours to encourage the consumption of milk replacer 24-48 hours prior to the onset of clinical signs.

CANINE PARVOVIRUS ENTERITIS (D. Pritchard)

In a greyhound breeding kennel with about 200 dogs more than 100 became acutely ill developing diarrhoea and dysentery. Eventually about 60 dogs died. The kennel operator turned the outbreak into a major media event, a consequence of his frustration at the failure of a rigid, intensive and very expensive vaccination programme. Previous incidents suggest to us that canine parvovirus still causes outbreaks of serious disease and deaths in large breeding kennels. Once again we are compelled to reflect on the value of vaccination of dogs against canine parvovirus

INVASION BY EXOTIC INSECT (D. Pritchard)

In mid-April several files trapped on a bulk carrier berthed at Portland were submitted to the RVL Hamilton for identification. Using a key supplied by the Foreign Disease Section of the Bureau of Rural Resources, three of the flies were provisionally identified as Chrysomya bezziana (Old World screw-worn fly).

The specimens were immediately forwarded by security express to CSIRO Division of Entomology in Canberra. Ancillary morphologic features not included in the key supplied in 1988 identified the suspects as C.megacephala not C.bezziana.

GIZZARD WORM (D. Pritchard)

Eight of twenty-four red-faced fernot finches in a backyard aviary, lost weight, became inappetent and progressively weaker, eventually dying.

The owner collected grasses and seeds to supplement the diet and these possibly carried grasshoppers with them. He also reported numerous weevils in some of the seed fed recently.

Necropsy of a bird revealed thickening of the lining of the gizzard which was also covered by a thick layer of yellow necrotic (caseous) material. Numerous nematodes were resident beneath the stratified lining of the gizzard; these were identified as Cheilospirura sp.

UNIVERSITY OF MELBOURNE - FACULTY OF VET. SCIENCE

ARSENIC POISONING IN CATTLE (J.Charles, P. Staples)

An acute scouring syndrome developed over a 5 day period in 10 Hereford cattle of mixed age (3 months to 3 years) from a herd of 16 at Ballarat. Affected animals showed sudden onset of diarrhoea with depression and anorexia and died within 12 hours. Clinically unaffected animals were removed to another property but developed comparable signs within 2 days and died.

Field veterinarians described abomasal congestion and oedema and small intestinal hyperaemia on necropsy of several animals. One 3 year old cow was submitted to the VCC for necropsy. Gross findings were extensive omasal mucosal haemorrhage, marked abomasal congestion, oedema and mucosal petechiation, mild ileal mucosal petechiation and numerous miliary 1-2 mm diameter white foci randomly distributed throughout the hepatic parenchyma.

Histopathology revealed severe abomasal submucosal oedema and mucosal congestion, petechiation and necrosis. Small intestinal segments were congested with acute mucosal haemorrhages. Multiple randomly-distributed foci of acute hepatitis were considered consistent with a nonspecific "saw-dust" liver lesion, but prominent hepatocytic apoptosis was also encountered. There was a severe acute segmental nephrosis bilaterally, with necrosis of descending proximal convoluted tubules. Omasal haemorrhages observed at necropsy were attributable to transmucosal invasion by zygomycotic hyphae, with vascular involvement.

Urine analysis in two animals revealed high levels of arsenic (135 mg/L and 158 mg/L), and water from a disused footbath to which the cattle had access was shown to contain 817 mg As/L. Urinary levels in excess of 16mg/L are regarded as highly suggestive of toxicity.

Clinical signs and necropsy findings were consistent with acute inorganic arsenic poisoning. The nephrotic and hepatic single-cell necrotic lesions were thought to reflect toxic effects on cell metabolism, and the gastrointestinal haemorrhage and oedema toxic effects on vascular integrity, with secondary fungal invasion of the omasum.

CENTRAL VETERINARY DIADNOSTIC LABORATORY

MYCETISM IN A DOG (S. Friend, P. Lording)

A 9 month-old English Sheep dog was presented to a veterinarian one morning in a state of collapse. The dog had become very ill overnight and was dehydrated due to repeated bouts of vomiting and diarrhoea. Blood was taken for haematological and biochemical analysis prior to starting fluid therapy. At that time, the dog was responsive and her mucous membranes and capillary refill time were normal, but within 30 minutes the dog had bloody projectile vomiting and diarrhoea and the venipuncture sites oozed blood. She began to convulse and went into a respiratory arrest.

Despite all attempts to revive her, she lapsed into a coma and died several hours later. The haematology and biochemistry results are listed below:

HAEMATOLOGY:	TEST RESULT	CANINE NORMAL
RBC x 10 12/1	8.55	5.5 - 8.5
Hb g/dl	21.5	12.0 - 18.0
PCV 1/1	0.64	0.37- 0.55
MCV f1	74	60-77
MCH pg	25	19-24
MCHC g/dl	34	32-36
T.Prot g/1	77	56-82
WBC X 109/1	14.00	6.00 - 17.00
Seg. Neutrophils	12.32	3.00 - 11.50
Band Neutrophils	0.56	0 - 0.30
Lymphocytes	0.42	1.00 - 4.80
Monocytes	0.70	0.15 - 1.35
Poikilocytosis	+	
Platelets	Adequate	
Plasma	2+ icterus	

BIOCHEMISTRY:

		TEST RESULT	CANINE NORMAL		
Bili.T.	umol/1	76	2	-	15
Protein	g/l	77	54	-	78
Albumin	g/l	33	24	-	38
Globulins	g/l	44	28	-	42
Sodium	mmo1/1	148	138	-	156
Potassium	mmo1/1	4.0	3.8	-	5.8
Chloride	mmo1/1	97	100	-	115
Bicarbonate	mmo1/1	8	18	-	24
Urea	mmo1/1	10.4	3.6	-	8.9
Creatinine	mmo1/1	0.26	0.6	-	0.15
Calcium	mmol/1	3.02	2.10	-	2.80
Phosphorus	mmo1/1	3.44	0.87	-	2.10
GPT (ALT)	l U/1	19,500	5	-	80
GOT (AST)	l U/1	28,540	10	-	80
Alk. Phos.	l U/1	324	10	-	120
CPK	l U/1	884	50	-	400
LDH	l U/1	17,420	50	-	400
Glucose	mmo1/1	clotted	3.3	-	6.7
Cholesterol	mmo1/1	8.56	3.9	-	7.8
Serum		2+ icterus			

The laboratory data were consistent with haemoconcentration, stress, reduced renal perfusion, renal damage, shock, acidosis and severe extensive hepatocellular damage.

The dog was necropsied and the most striking finding was haemorrhage. Ecchymoses occurred throughout most organs, including the thymus, lungs, heart, kidneys, spleen and liver, as well as over the pleurae, splenic capsule and the serosal surfaces of the gastrointestinal tract. The stomach contained approximately 50-100ml of digested blood and the rectum contained soft black faeces. The urine was yellow, turbid and contained numerous granular casts, debris and bilirubin. Histological findings included acute massive hepatic necrosis, severe acute tubular necrosis, pulmonary congestion and oedema, acute myocardial degeneration, vascular thrombosis and disseminated intra-vascular coagulation.

The owners, when questioned about the possibility of a toxic insult recalled that the dog had been playing with some mushrooms which grew under their oak trees. These mushrooms were identified as Amanita phalloides or the "Death Cap". This mushroom is extremely toxic and has been responsible for many deaths in Europe and North America. The toxic principles are cyclic oligopeptides, phallotoxins and amatoxins. There is enough amatoxin in half a mushroom cap to kill an adult human. Phallotoxins are heat labile and poorly absorbed from the GI tract; however, amatoxins are heat stable, resist drying and stomach acid. The latter are transported to the liver where they inhibit RNA polymerase II preventing DNA transcription and protein synthesis resulting in cell death. Amatoxins are excreted through the kidneys.

The amanitas are woodland fungi and Amanita phalloides is a mycorrhizal species. It has a flattened yellowish, greenish or brown cap with a circular ring just below the cap.

Mycologists are worried about the increase in the numbers of Amanita phalloides being reported. Abundant rains this autumn have provided ideal conditions for the growth of this fungus. Although mycetism or mushroom poisoning in domestic species is uncommon, clinicians and pathologists should be aware of the clinical signs, symptoms and pathological findings for rapid diagnosis. The reference listed below describes therapy for and the means of detection of the toxins of Amanita species.

Reference:
Kallet A., Sousa C., Spangler W., Mushroom (Amanita phalloides) toxicity in dogs. California Veterinarian 42; 9-11, 22, 47, 1988.

SOUTH AUSTRALIA Vin Ling Tham

VETERINARY PATHOLOGY SERVICES

SUSPECT FENUGREEK TOXICITY IN SHEEP – A NEW SYNDROME (Rob Rahaley)

We recently investigated an "outbreak" of ataxia, opistotonus and recumbency in a small mob of sheep grazing a regrowth of fenugreek in a pea-stibble paddock. Brains from 3 sheep were examined at Vet. Path. Services but there were no significant histological changes present. Of the remaining 9 affected sheep, none recovered.

Fenugreek is an aromatic legume used in salads etc. A significant export market exists for the plant and its cultivation is on the increase. There are several anecdotal accounts of fenugreek poisoning in sheep but Dept. of Agriculture personnel contacted in S.A., N.S.W and Victoria were unaware of specific cases. The diagnosis in this case remains speculative but is one to watch.

WESTERN AUSTRALIA Ruth Reuter

PERTH ANIMAL HEALTH LABORATORIES

RENAL FAILURE IN KOALAS (Jim Dickson)

Reference the article presented in April's issue where kidney disease in a 10 month old koala at Perth Zoo was mentioned.

A further series of kidney sections were cut and Pizzolato positive (oxalate) calculi were demonstrated. Since the mother's kidneys also showed oxalate deposits, leaves of the Eucalypt fodder trees were examined for oxalate content.

The trees were E. viminalis, E. microcorys, E. camuldulensis and E. rudis. The only other leaves available were from the peppermint tree Agonis flexuosa which were also tested.

Oxalate was present at less than 0.25% by weight - in other words not quantifiable.

Useful References

Canfield, PJ & Dickens RK (1982) AVJ 59, 121 Oxalate poisoning in a koala.
Canfield, PJ (1989) AVJ 66, 103 A survey of urinary tract diseases in New South Wales koalas.

ALBANY REGIONAL LABORATORY

(RUTH REUTER)

VISCERAL MAST CELL TUMOURS IN A SHEEP

The carcass of an aged ewe was condemned at a local abattoir for "lymphosarcoma" involving the lymphatic system, liver, spleen and lung. Microscopic sections of lung and spleen revealed cords and sheets of pale vacuolated cells with faintly granular cytoplasm interspersed with eosinophils and separated by fibrous connective tissue. On Toluidine blue staining the cytoplasmic granules were metachromatic, supporting a diagnosis of multicentric visceral mast cell tumour.

STILLBIRTHS IN CATTLE

The Albany region has experienced a remarkably good season this year, with abundant feed and mild weather conditions. As a result many herds have encountered calving problems due to young heifers, fat cows and very large calves. Mixed in with the identifiable dystocias and uterine inertias is a component of stillbirth for no apparent reason. The laboratory, in conjunction with the Veterinary Field Service, is looking at these cases to determine if any consistent predisposing factors can be identified.

A "NON EXISTENT" CASE OF RED ALGAE POISONING

In March of 1989 a mob of lambs was turned out onto a seven hectare paddock containing a shallow dam. Shortly thereafter, the owner reported to his district agricultural advisor that he had lost five lambs, and that the water in the dam was blood-red. He was advised to shift the stock and to collect water samples for analysis. On examination at the laboratory, the water sample was orange-red with massive numbers of algae seen on smear. These were identified as a non-toxic Euglena species producing carotenoid pigment in intense sunlight, however mice injected intraperitoneally with samples of the water died within 18 hours. Subsequent injection of serial dilutions of formalinised clarified water had no effect on mice, and a heavy growth of Aeromonas was cultured from the original sample. On further discussion, the owner denied that any deaths had occurred in his flock. The dam has since been filled in and the lambs shifted to another paddock.

CRANIAL FRACTURE IN A STRIPED DOLPHIN

Early in February a subadult striped dolphin (Stenella coeruleoalba) was found beached near a nature reserve in the Albany region. The only external abnormality was some haemorrhage behind the right eye. The head was removed to be included in a reference collection. On boning out the head, the reserve manager noticed a hole in the skull and contacted the laboratory. In the centre of the right squamous temporal bone there was an irregular hole approximately 3.0 centimetres in diameter with jagged edges and hairline cracks radiating outwards from the centre. The appearance was consistent with a blow on the side of the head with a blunt object.

SCHOOL OF VETERINARY STUDIES MURDOCH UNIVERSITY

PASTERURELLA MULTOCIDA IN POULTRY (J.B. Thomas)

Increasing mortality was noted in meat breeder sheds of a large commercial poultry farm. Examination of live birds showed marked oedema of the wattles, depression and increased respiratory noise. On gross examination, there was extensive oedema of the subcutaneous tissues of the head and many birds had an acute fibrinous peritonitis and pericarditis. All tissues grew a heavy pure growth of Pasteurella multocida. Mortalities are now dropping after antibiotic therapy.

CANINE HERPESVIRUS (Clive Huxtable)

Eight out of eight greyhound puppies became acutely ill at 14 days of age and died over a two day period. Necropsy revealed diffusely congested and oedematous lungs and numerous ecchymotic haemorrhages in both renal cortices. Histologically there were:

a. multifocal necrosis and haemorrhages in the renal cortices.
b. acute focal hepatic necrosis.
c. acute pneumonitis and focal necrosis in the lungs.

The clinical and pathological features were considered to be diagnostic for neonatal canine herpes infection. Inclusion bodies were not conspicuous. This disease is rarely diagnosed at MUVH, but grapevine rumour suggests it may be reasonably common "out there".

MALIGNANT CATARRH (Clive Huxtable)

A two year old stud shorthorn cow developed unspecified nervous signs and bilateral corneal opacities and was destroyed. At. necropsy the only gross finding of note was intense enlargement and congestion of lymph nodes of the head, neck and thoracic cavity. Histologically, lymphocytic vasculitis was evident in the adrenal capsule, kidneys and meninges, and perivascular cuffing was widespread in the brain. Enlarged lymph nodes had predominantly paracortical hyperplasia. A diagnosis of Bovine Malignant Catarrh was made. This has not previously been seen at MUVH although MCF has been diagnosed in farmed deer. This cow was in contact with sheep.

PERTH ANIMAL HEALTH LABORATORIES

Microsporidiosis in freshwater crayfish (JEREMY LANGDON)

This laboratory has recently detected several cases of a new microsporidian protozoan disease in marron, Cherax tenuimanus, from farm dams in Western Australia. Marron are a freshwater crayfish native to Western Australia, and are farmed in several states. No microsporidial diseases have previously been reported in the species.

The disease ranges from light, subclinical infections to lethal pansystemic infections. Advanced cases show multiple 2-5mm whitish streaks or nodules in the tail muscle, visible through the thin ventral exoskeleton. The same lesions can usually be found in greater abundance in moribund animals in the dorsal thoracic muscles, stomach and intestine at necropsy. A wet slide preparation of the lesions reveals numerous ovoid microsporidian spores with a thick refractile wall. The fresh spores are 4.8-6.2 x 2.0-2.8 µm in size, and may be seen free or in groups of 8, 16 or 32 in a thin, membranous sporophorous vesicle. Each vesicle develops from a 10-25 µm multinucleate meront, and hundreds occur together, replacing normal tissue with spores but inducing little host inflammatory response. Death probably results from the gastro-intestinal lesions.

Early indications are that it is a disease of low prevalence and restricted distribution. The species from marron overlaps the criteria for Thelohania and Pleistophora so is assigned to the general genus Microsporidium pending further studies. We have detected a similar species in redclaw, Cherax quadricarinatus from Queensland.

Microsporidiosis is generally regarded as untreatable, and eradication by slaughter is sometimes employed. Movement restrictions may also be appropriate in some cases. We are currently investigating ways of breaking the largely unknown life-cycle and the potential of several drugs for treatment of this new disease of marron.

TASMANIA Judith Handlinger

MT PLEASANT LABORATORIES - LAUNCESTON TASMANIA

SOME CAUSES OF FALLOW FAWN (DAMA DAMA) DEATHS (Roy Mason)

Although the deer industry is a developing industry within Tasmania, access to pathological material from deer is limited, especially from fawns. The following provides a breakdown of findings in fallow deer fawns (Dama dama) from one property in southern Tasmania.

Between mid December 1988 and early February 1989 35 fawns were received for examination.

Breakdown of Losses
(21 males14 females)

* Eleven deaths attributed to starvation/mismothering complex (8 males and 3 females with body weights ranging from 3.0-6.7kg [mean 4.3 kg] in males and 2.6, 3.6 and 5.9kg in the three females).

* Ten deaths due to acute enteritis characterised by marked pooling of watery fluid in the colon and caecum (7 males, 3 females). No Yersinia, Salmonella, Cryptosporidium, Clostridium were implicated. E. coli was consistently isolated but no common serogroup could be identified. These fawns had milk in their stomachs and had not metabolised their fat reserves to any appreciable extent.

* Five fawns have multiple abscesses in either liver, lungs or both caused by Sphaerosphous necrophorus infection. No portal of entry was obvious but it is presumed the organisms gained entry via the naval soon after birth. These five fawns were older than fawns succumbing to starvation-mismothering or enteritis. Fallow deer fawns appear rather susceptible to Sphaerosphorus necrophorus infections since, in our experience, it is the only consistent bacterial agent we have recovered (albeit from a limited number of animals).

* Three fawns died soon after birth for no detectable reason and two died at an older age again with no obvious lesions.

* One fawn died from rumenitis caused by passage of ingested milk into the rumen.

* Two fawns were too autolysed for meaningful examination.

Brain homogenates from fawns attributed to have died from starvation-mismothering were inoculated into mice for the isolation of Toxoplasma gondii. No toxoplasma was detected two months after inoculation.

MACROCARPA ABORTIONS (J. Handlinger/C. Donaldson)

Ingestion of Cupressus macrocarpa is a frequently suggested but seldom confirmed, cause of abortion. We did appear to have had a genuine case last year.

A dairy herd of 130 Fresian cows experienced a storm of early calving and abortions one week before calving was due to commence. At least 23 cows calved/aborted over about a week commencing 3 days after the cattle were sheltered during stormy weather, without hay or other feed, in a paddock containing a 15 x 6m pile of macrocarpa trimmings, which they had eaten as far as their reach. Retained placenta was seen in 22 of the 23 cows. All cows appeared to milk well though they were lethargic for 2-3 days after calving. Many of the calves survived, though 2 weak premature calves were destroyed, and 2 younger foetuses of about 7 months gestational age were aborted.

The two euthanased weak calves and one foetus were submitted for autopsy. Neither live born calf showed any gross or histological lesions other than some leg oedema and small haemorrhage referable to birth trauma. The aborted calf was slightly autolysed, with slight excess of body cavity fluids. No specific pathology was seen in any organ though (foetal) polymorph leukocytosis, including eosinophils, was evident in tissue vessels, probably indicating foetal stress. None of the brains showed leukoencephalomalacia , as seen in some previous cases (Mason, 1974). No bacterial infections were detected by smears or cultures. Placentas were not available.

One of three urines from cows showed marked ketonuria. Of 6 bloods submitted, one showed marginal hypocalcaemia , an additional two showed marginal hypomagnesemia and three showed a moderate to marginal leukopenia, particularly of polymorphs. However the latter is said to be common post partum, possibly reflecting uterine pooling of polymorphs.

Retained placentas have been a feature of all reported macrocarpa abortions, and was attributed to markedly swollen cotyledons in the description of N.Z. cases by MacDonald, but placentas have apparently never been available for examination. However, the associated marked illness, treatable by antihistamines, which he described, was not seen in this or most other outbreaks. The presence or absence of leukoencephalomalacia may reflect the duration and severity of placental abnormalities. Also common to all reports is the ingestion of very large quantities of usually felled macrocarpa.

Ref: MASON, R.W. (1974). Aus. Vet. J. 50:419
MACDONALD, J. (1956). N.Z. Vet. J. 4:40

Registry Committee

Australian Society for Veterinary Pathology

The National Registry of Domestic Animal Pathology had a successful year with Dr. Bill Hartley employed ½ time for 1 year on a grant from N.S.W. Agriculture and Fisheries. The grant finished in January, 1989 when Dr. Hartley resumed duties as honorary Registrar.

Training Material

Thirteen hundred and twenty six good quality histological cases have been selected and filed in the Registry representing:

Cattle	354	Goat	91	Dog	231	Misc.	11
Sheep	247	Horse	159	Cat	73		
Pig	75	Deer	18	Poultry	67		

Further case material and a large collection of Kodachromes of gross and microscopic pathology await full indexation.

Computerised Index

A grant of $3,700 from the McGarvie Smith Trust Fund permitted the purchase of a custom designed computerised index program. The program was installed in April and allows rapid searching of the Registry's collection by any combination of variables recorded in the index including species, tissue and aetiology.

Second Opinion Service

Dr. Hartley has provided a free second opinion service for a growing number of pathologists throughout Australia and New Zealand. The referred slides are usually donated to the Registry.

Training Visits

Several veterinarians visited the Registry for periods of training ranging from 3 to 10 days. In addition Dr. Hartley visited Central Veterinary Laboratories, Adelaide and James Cook University, Townsville, to run training seminars and gave several lectures in Veterinary Pathology at the University of Sydney.

ACVSc Examinations

Material was again provided to the College for examination leading to membership of the Australian College of Veterinary Scientists Pathobiology Chapter. Case material donated from other sources has been donated to the Registry.

Future Location

The Registry will move to rooms at the new Elizabeth Macarthur Agricultural Institute at Camden in late 1989, it can be reached by a 60 minute electric train ride to Campbelltown with a minibus trip of 15 minutes to the Institute. Accommodation is available in Camden.

Funding

Donations towards running costs for the Registry were received from:

Murdoch University	$250
James Cook University	$500
Bureau of Rural Resources	$500

Since January, 1989, attempts to secure ½ salary funding for the Registrar have been unsuccessful.

Current Balance in the Registry's accounts at NAB Camden totals $2909.41 with $1300 earmarked for data entry expenses leaving an uncommitted amount of $1609.41.

The Committee successfully applied for exemption from debit tax for the Registry's cheque account.

Equipment

During the year a further Technicon slide file cabinet and a Kodak Carousel projector were purchased. The Registry is now adequately equipped to meet all its current needs with the exception of a computer printer .

ADVERTISEMENTS

WANTED

American Optical 820 Rotary Microtome Contact - David Williams, Veterinary Research Institute, Parkville, Victoria (03)347 2322.

REGISTRY NEWS

EUREKA!

The Registry has learnt that Animal Health Committee (the State Chief Veterinary Officers, CSIRO and BRR) has agreed to finance the Registry for a period of two years beginning 1st January 1990.

Funding provides a half salary for the Registrar, Dr. Bill Hartley, plus travelling expenses to allow the Registrar to visit each State and hold a short training course in each of the two years. Funding continuation will be reviewed at the end of the period.

Thanks are due to all ASVP members who lobbied their Chiefs to support the proposal. Your efforts have given the Registry the chance it needed. Now it is up to us all to support it by:

- donating case material
- sending case material for a second opinion
- borrowing Kodachromes of gross and microscopic pathology for use in seminars and lectures
- visiting the Registry for self tuition or informal one to one training
- request the Registrar to provide training courses at the Registry or in your home State

Bill will keep the Registry ticking over during the remainder of 1989 in an honorary capacity. Most of the time you can write to him at Taronga Zoo, P.O. Box 20, Mosman, 2066 - (phone: 02 969 2777)

NAME CHANGE

Several people have suggested that we should change our name from the National Registry of Domestic Animal Pathology. The new name should emphasise the dynamic training/education role rather than a static collection. How about National Centre for Animal Pathology? (NCAP) or Central Register for Animal Pathology. (CRAP - thanks Peter Phillips!).

Please comment by dropping a line to Bill or to me.

REQUEST FOR MATERIAL

Over the next few months if you come across a nice case of any of the following conditions - please send slides and/or blocks to Bill.

Cattle

Infectious bovine rhinotracheitis
Mucosal disease
Malignant catarrhal fever

Pigs

Rhodococcus equi lymphadenitis
Tuberculosis
Mulberry heart disease

Horses

Neurological conditions
Tumours
Skin conditions

Deer

Acute malignant catarrhal fever
Neurological conditions
Enteropathies

Sheep

Skin conditions
Acute **B.** ovis epididymitis
Yersinia enteritis

Poultry & Caged Birds

Bone conditions
Tumours
Protozoan conditions

Goats

Neurological conditions
Placental and foetal conditions
Plant toxicities

Dogs & Cats

Neurological conditions
Tumours
Skin conditions

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