THE VETERINARY PATHOLOGY REPORT

Australian Society for Veterinary Pathology
Regional Veterinary Laboratory,
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President's Report.

The Executive of the Society has been gratified by the response from members to our first edition of "The Veterinary Pathology Report". We trust that we will be able to maintain the momentum for the next eighteen months. Our congratulations must go to Ian Links for editing the contributions and organising the printing and distribution. We would like to keep the publication as a vital form for the exchange of ideas and information amongst our membership. It is an ideal vehicle for advertising positions in Veterinary Pathology, opportunities for postgraduate study and industrial grievances.

Since the last "Veterinary Pathology Report" the Executive has been active in a number of areas. Our suggestion regarding the more detailed description and discussion to accompany the "slide of the month" has been successfully implemented with the assistance of Clive Huxtable. Plans for our next Annual Conference in Brisbane during May. 1986, are gradually taking shape. The foundation material for our Registry of Veterinary Pathology is about to embark across the Tasman, hopefully free of French intervention. Customary prodding from Ton Hungerford has galvanised us into dynamic action in the planning of the postgraduate refresher course on Gross Pathology.

ANNUAL CONFERENCE 1986 - There should be no need to remind you of the dates and venue which are 17th and 18th May, 1986 and Brisbane, respectively. Roger Kelly has been busy organising the venue at the University of Queensland, accommodation and possible guest speakers. We hope to have a trade exhibit depicting re-agents and equipment and John Searson has undertaken the planning of this venture. If you have any contacts or ideas please let John know. Phone 069 230928.

At this stage we are concentrating on the first day of the conference with the theme of "Immunopathology and Immunohistochemical Techniques". Professor Peter Doherty has been invited to give the opening key-note address. Roger Kelly is on the trail of a speaker to cover the more technical aspects and we hope to persuade one of our members to give the concluding talk highlighting the veterinary applications. The remainder of the first day will be devoted to presentations from our members. We are soliciting these contributions now and would appreciate nominations by the 31st December, 1985. Presentations will be selected in the following order of priority:

1. demonstrate the use of immunopathological or immunohistochemical techniques.

2. demonstrate diseases where these techniques could be used to define a condition further but are not currently available.

3. diseases which have an underlying immunological pathogenic mechanism.

Intending contributors should send us a type written summary of their presentation together with single copies of Kodachromes , photographs or glass slides to illustrate specific points. We envisage that these would be copied as required and circulated to individual institutions prior to the conference. The summary should emphasise the techniques used including details of difficulties you have encountered or improvements developed. Where possible the relevance of the technique to the diagnosis of disease conditions in the routine clinical pathology laboratory should be demonstrated. Important references should be cited, particularly those detailing methods. The summaries should be typed single space in Letter Gothic 12 type (or Prestige 12 or similar) on A4 paper with a 35cm left-hand margin. Length may vary from 1/2 a page to a page or longer where details of techniques not readily accessible in the literature are included. We anticipate that there will be 10 minutes per presentation followed by 5 minutes discussion.

We need your participation so please volunteer but remember the deadline is the end of 1985.

The second day of the conference will be organised along similar lines to previous years. We will harass you for contributions in the next "Veterinary Pathology Report".

AUSTRALIAN REGISTRY OF VETERINARY PATHOLOGY.

Bill Hartley has been labouring intensely on our behalf. He has had over 1,000 transparencies from the New Zealand Registry duplicated and mounted in plastic. A considerable amount of Bill's own time has been spent labelling and collating all of this material. In the end Bill should bring "home" from New Zealand about 4,000 transparencies, several hundred blocks and over l,000 sections. As he said, "these should form the basis of a worthwhile collection". In addition, Bill hopes to raid the Rural Veterinary Centre at Camden for material he "left behind!".

On 2nd October, 1965, Bill will be returning to Australia. Soon after that date we hope to organise a meeting with Bill to discuss the long term planning of the Registry. It is hoped that Keith Walker, Officer-in-Charge of the Regional Veterinary Laboratory, Glenfield, where the Registry will be initially housed, will play a vital role in these discussions.

Bill's efforts provide us with an excellent basis for the Registry. It will now be up to all of us to contribute material so that the Registry can truly reflect the diseases of veterinary importance from throughout Australia. You will be advised when the procedure for submission of material to the Registry has been finalised.

Native Fauna Pathology Registry.

Over a period of several years we have discussed the need for a central repository or collection of material relating to diseases of our native animals and birds. I am pleased to inform members that such a collection is in the process of development. Bill Hartley has been invited to initiate the project and he will be 'housed' at Taronga Zoo in Sydney. A separate notice of this Registry briefly explaining its aims and objects together with a request for materials has been or will be sent out from Taronga to veterinary and other institutions in Australia.

I should like to recommend to all our members that they forward materials for inclusion in this Registry. If you are able to sort out suitable old case material that would be great, if not please send material from current cases.

POST-GRADUATE REFRESHER COURSE ON GROSS PATHOLOGY - MAY 1987.

Richard Whittington has provided us with a catchy title for the course - "Through the Naked Eye - The Gross Pathology of Domestic Animals". With plenty of prodding from the original "Big 0", Tom Hungerford, we have the programme almost finalised. There will be 6 lectures on diseases of sheep, 6 on cattle, 4 on pigs, 3 on horses, 3 on dogs, 2 on cats, 2 on goats and 1 each on cage birds, deer and fish. We hope to attract a large field of pathologists, field veterinary officers and practitioners.

Many of you will be invited to lecture. When you receive the call from above please rise to the occasion and ensure that we educate the "Philistines" of the profession. Don't be put off by a lack of transparencies because the Registry will be able to assist you in this regard.

Remember the date. May 1987, at the University of Sydney. Those of you employed by Government Departments and Universities should start begging for financial assistance at this early stage. Promotion of the course to your colleagues in the field would also be appreciated.

JUBB, KENNEDY & PALMER "PATHOLOGY OP DOMESTIC ANIMALS" - 3rd edition.

The new edition of the veterinary pathologist's bible is now available in Australia at a list price of $418 for three volumes. In contrast it sells for approximately $238 (Aust.) in the U.S. Before considering buying Jubb & Kennedy it may be to your advantage to contact Geoff Mitchell at R.V.L. Benalla, (057 622933) to explore the possibility of a substantial discount.

GRADUATE TEACHING SET IN APPLIED PATHOLOGY.

Phil Ladds of the Graduate School of Tropical Veterinary Science, James Cook University of North Queensland, has prepared a teaching programme in Applied Pathology (mainly histopathology) which may be of value to young pathologists in regional laboratories. It includes a VHS video (2 hr) which illustrates the features to be recognised in 100 accompanying microscope slides. The set is available on loan (say 2 weeks at a time) to any individual or laboratory providing they are prepared to pay postage and ensure the set is returned in good condition. Phil can be contacted:

C/- Graduate School of Tropical Veterinary Science,
James Cook University,
TOWNSVILLE. QLD. 4811
AUSTRALIA.

MEMBERSHIP SUBSCRIPTIONS.

Only 50% of members have renewed their subscriptions for 1985-86 ($10). These are now overdue.

XXIII WORLD VETERINARY CONGRESS 16-21 AUGUST, 1987, MONTREAL, CANADA

In the pathology section the allotted time for the papers including discussion wi11 be 15 minutes. A limited number of 30 minute papers may be accepted.

The pathology themes for this Congress are:

1. Dermatopathology
2. Gastro-intestinal diseases
3. Respiratory diseases of horses
4. Osteopathology
5. Animal oncology
6. Immunochemistry and Immunocytochemical techniques
7. Free communications

Nominations of titles should be sent to the Hon. Secretary/Treasurer, World Association of Veterinary Pathologists before 31 October, 1985. Address:

University of Queensland Veterinary School, Brisbane 4067. Australia.

Poster sessions will be arranged to give members added opportunities to present their work. Authors will be requested to be present in the poster room for part of the time for discussion and to answer questions.

International Meeting of Veterinary Pathology

Cordoba, Spain 17-20th September, 1986.

This Joint meeting of the WAVP with the European Society of Veterinary Pathology was announced in the last Newsletter. Preparations are progressing as planned.

Titles for papers will be accepted until 10 March, 1986.

Post congress tours are planned, which include visits to a series of most interesting places including Granada, Sevilla, Ronda, Gibraltar and Malaga. A stay at a seaside resort at very competitive prices is also envisaged.

Further information may be obtained from:

Prof. Dr. W. Drommer,
President, European Society of Veterinary Pathology,
Tiertraztliche Hochschule Hanover,
D-3000 Hanover 1,
Germany.

JOBLINE - Training and employment opportunities for Veterinary Pathologists at home and abroad.

a. VETERINARY RESEARCH OFFICER, MICROBIOLOGY, CENTRAL VETERINARY LABORATORY, GLENFIELD, N.S.W. AUST.

See Advertisement October A.V.J.

b. RESIDENCY IN VETERINARY PATHOLOGY, NORTH CAROLINA STATE UNIVERSITY, SCHOOL OF VETERINARY MEDICINE, beginning March 1, 1986 or as soon thereafter as possible.

The programme will emphasize competence in veterinary pathology to prepare the trainee for certification the ACVF. Individuals successfully completing the training programme are encouraged to continue their training in a research programme leading to the Ph.D. degree. Applicants must possess a D.V.M. or equivalent degree; previous experience in pathology is desirable but not mandatory. Stipend is $16,000 per year. Applicants should send a curriculum vitae, a statement of goals and interests, complete transcripts and three letters of recommendation. Closing date for applications is December 15, 1985. Send communications to:

Dr. N. J. MacLachlan,
Department of Microbiology, Pathology and Parasitology;
School of Veterinary Medicine,
North Carolina State University,
4700 Hillsborough Street; Raleigh, NC 27606.

c. TRAINING IN VETERINARY PATHOLOGY, (1986) NEW YORK STATE COLLEGE OF VETERINARY MEDICINE. CORNELL UNIVERSITY. U.S.A.

The biphasic programme emphasizes competency in anatomic pathology and advanced research training, eventuating in specialty board certification by the ACVP, and when appropriate, a PhD in Experimental Pathology. Areas of specialization include Environmental and Toxicological Pathology, Pathology of Exotic Animal Species (San Diego Zoo Residency), Senior Residency Training in Necropsy Pathology and

Surgical Pathology Services and post doctoral training in Aging Research. Application will be accepted through December 31, 1985, notification will take place prior to March, 1986. A degree in Veterinary medicine is mandatory. Previous experience in veterinary pathology is desirable but not mandatory. Salary/stipend range is $13,380-$19,716, depending on experience. Application materials (curriculum vitae and personal bibliography, official college transcripts, three professional references and a brief statement concerning career goals and availability) should be directed to Robert H. Lewis, DVM, Chairman, Department of Pathology, E205 VA Moore Laboratory, New York State College of Veterinary Medicine, Cornell University. Ithaca, 14853.

d. VETERINARY ANATOMIC PATHOLOGIST. U.S.A.

The Western College of Veterinary Medicine, University of Saskatchewan, Saskatoon, Saskatchewan, seeks applications for a term position in Veterinary Anatomic Pathology. Duties include undergraduate and graduate teaching, research and service. Position is subject to annual review. Opportunities exist for preparation for Board exams and for participation in research in a Toxicology Centre. Salary commensurate with experience. Applicants must have a DVM degree or equivalent, post graduate training in anatomic pathology, and, upon appointment, must become a member of the Saskatchewan Veterinary Medical Association. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents.

Reply: Send Curriculum Vitae and 3 letters of reference to -

Dr. C.E. Doige, Head
Department of Veterinary Pathology
Western College of Veterinary Medicine
University of Saskatchewan
Saskatoon. Saskatchewan S7N OWO.

E VETERINARY CLINICAL PATHOLOGIST. U.S.A.

The Department of Veterinary Pathobiology, The Ohio State University invites application for a tenure-track faculty position at the Assistant or Associate Professor level. Candidates should have a D.V.M. (or equivalent) and Ph.D. degrees, and ACVP certification (or eligibility) in clinical pathology. Advanced training/research experience in veterinary clinical pathology is acceptable in lieu of Ph.D. degree. Responsibilities include teaching in the core veterinary medical curriculum, professional service in applied Veterinary clinical pathology, instruction of graduate students and residents, and development and maintenance of independent and collaborative research programmes. Salary and starting date are negotiable. Deadline for receipt of applications is January 1st, I986 or until the position is filled. Applicants should send Curriculum Vitae, list of publications, statement of career goals, and names of three references to:

Dr. Gary Kociba,
Department of Veterinary Pathology
The Ohio State University,
1925 Coffey Road, Columbus, Ohio 43210.

STATE REPORTS.

WESTERN AUSTRALIA (prepared by David Pass).

MURDOCH UNIVERSITY.

Pig Diseases

A well-managed intensive piggery recently had an outbreak of "erysipelas". The pigs had typical skin lesions, gross lesions and microscopic lesions including bacteria in vessels, etc. but no bacteria were grown from any case. The pigs were on antibiotic therapy and we can only assume that this influenced our cultural results (controversial though this may be).

The same piggery has had an outbreak of Greasy Pig Disease in suckling and weaner pigs and there has been a continuing problem with H. pleuropneumonia infections as occurs here every winter. Two of these cases are of particular interest. Two finisher weight pigs died suddenly. Gross lesions consisted of petechial and ecchymotic haemorrhages in lungs and intense congestion of meningeal vessels. There was no meningitis. H. pleuropneumonia was isolated from lung and meninges in pure culture.

Systemic mycosis in a German Shepherd due to Fusarium sp.

This case is of interest because it contrasts with the now well known entity of A. terreus infection in German Shepherd dogs. The dog had rapid weight loss. On routine examination, fungi (Fusarium sp.) were detected in urine. Chemotherapy was unsuccessful. At necropsy, in contrast to A. terreus cases, there were no gross lesions other than pancreatic atrophy. Histologically, numerous pyogranulomas were present in pancreas, liver and spleen. The major cause of weight loss was pancreatic insufficiency resulting from pancreatic atrophy.

ANIMAL HEALTH LABORATORY, South Perth.

Allergic Pneumonitis in a Horse (Ron Peet).

A private practitioner was called to attend an older recumbent mare showing severe tachycardia and sweating. A new batch of hay with obvious mould contamination had just been fed, so he diagnosed an allergic condition. Treated the mare with I/V Dexamethasone and it made a dramatic recovery. Next day the yearling was found dead and the practitioner noted very wet lungs as the main feature visible at post mortem. Histological examination revealed severe oedema with numerous macrophages in alveoli, congestion and haemorrhage of the interstitium with some necrosis, and a marked vasculitis of some vessels. EVA was considered but eliminated because it was not a pan-vasculitis in the lung and there were no visible lesions in the other tissues submitted. Also no further cases were reported after removal of the hay and the response of the mare to corticosteroids supports the diagnosis of allergic pneumonitis.

Lead Poisoning in Lambs (Mark Kabay).

Two cases of lead poisoning were diagnosed in weaner lambs owned by a hobby farmer. The owner had lost other lambs in past years, and two this year which, as he described, developed a stiff legged gait, became inappetent, flaccid and died within 48 hours of showing signs. One animal presented did walk as if unable to adduct its hind legs. The other, however, was depressed, blind, had laboured respiration and abdominal pain referable to the kidneys. At post mortem the kidneys from both animals were swollen and had pale cortices, in addition the cortices of the second lamb contained multiple petechial haemorrhages and perirenal fat was oedematous.

Microscopically the kidneys of both animals had a nephrosis characterized by tubular dilation with necrosis and regeneration of tubular epithelium. In the second lamb many protein and fibrin casts were also present within tubules. Focal areas of cortical lamina necrosis was found in the cerebral cortex of both animals.

The diagnosis of lead poisoning was confirmed by the high levels of lead present in the liver and kidneys of both animals (110 ppm and 140 ppm liver, 40 and 50 ppm kidneys).

On visiting the property the lambs were found to have access to a broken car battery and to flaky, lead containing paint on a shed in the paddock. Either could have been a possible source.

Reported cases of lead poisoning in cattle are common but rare in sheep. Is it that they do occur but are not reported? Intranuclear inclusion bodies in the renal tubular epithelium, a feature of lead poisoning, were not found in these cases.

TASMANIA - Prepared by David Obendorf

PERSONAL: Dr. B.L. Mundav was awarded the Distinguished Service Award of the Wildlife Disease Association at the Fifth International Conference in Wildlife Disease in Uppsala, Sweden. This prestigious award was given to Barry in recognition, not only of his prolific work in the investigation of wildlife diseases, but also of his role in founding the Australasian Section of the Association. This is the first time the DSA has been awarded to an Australasian member of the WDA.

1. COLISEPTICAEMIA IN LAMBS

This spring E. coli (Serotype °78) Septicaemia is again one of the major infectious causes of lamb mortality in Tasmania. In a recent survey conducted on mares experiencing coli septicaemia in 1984 the following results were obtained.

Affected lambs are older or average age of flock, young lambs in flock not affected. (i.e. lambs < 3 weeks of age not effected.) No apparent association between attack rate and the number of lambs in affected flocks. There is a suggestion that infection in lambs between 8 to 12 weeks is associated with the development of chronic E. coli disease causing clinical illness instead of sudden death. Losses on the property in previous years does not appear to prevent losses in subsequent years.

There was no real environmental pattern that emerged. However, some thought cold weather was associated with losses. Both exposed and sheltered and wet and well drained paddocks were involved. Lamb losses were not restricted to old pastures because losses occurred on first year pastures - suggests infection not carried over in pasture from year to year.

2. INTESTINAL PARASITISM IN TASMANIAN FORESTER KANGAROOS

Mortalities have been reported in yearling Tasmanian forester kangaroos (Macropus giganteus tasmanicus) in a confined population near Launceston. During June and July approximately 10 young kangaroos had been found dead. Freshly dead animals had anaemia, accumulations of fluid in body cavities and 1200 to 1500 Globocephaloides nematodes in their proximal 3 to 4 feet of small intestine. These deaths and pathological findings are consistent with reported outbreaks of this disease in eastern grey kangaroos in Victoria. Jack Arundel has investigated the epidemiology and pathology of this disease under similar circumstances in a confined population (Arundel, J.H., Barker, I.K. Beveridge, I., 1977. Diseases of Marsupials, pp. 141-154 in “The Biology of Marsupials” ed. Stonehouse & Gilmour. MacMillan, London.).

3. LARVAL FLEA INFECTIONS ON DASYURID MARSUPIALS

Uropsylla tamnanicus (flea) larvae are a reasonably common ectoparasite of the larger Tasmanian dasyurids (devils, tiger quolls and native quolls). Recently we received a dead native quoll (Dasyurus viverrinus) with a very large number of flea larvae embedded in its skin.

The lesions caused by these parasites can only be described as focal suppurative cutaneous "myasis". Various sizes of the larval fleas (presumably different instar stages) were found embedded into the skin forming crateriform pustular lesions with usually only one larva per pustule. The posterior end of the larva with its spiracles protrudes slightly from the central pore of the pustule. Flea larval lesions are found predominantly on the lower extremities of the limbs (usually above the footpads and medially), on the tail, scrotum, inner thighs, eyelids and ears.

4. LISTER IAL ENCEPHALITIS IN GOATS

An outbreak of listeriosis was seen recently in 6 week old Saanen goats being fed silage. Over a period of 10 days 13 kids and 2 adult goats developed clinical signs. Initially the goats showed increased salivation and ataxia. Some goats would bleat loudly as if in pain. CNS signs progressed with head kinking, nystagmus and recumbency. Temperatures were elevated (up to 415°C). Urine analysis confirmed a strong positive glucosuria and moderate ketonuria. Although brain stem cultures failed to recover the organism, the histological lesions were consistent with Listeria monocytogenes infection.

NEW SOUTH WALES Prepared by Mark Carrigan

Intestinal Yersiniosis in Cattle (J. Boulton, Wollongbar)

As in previous years, winter rain brought this disease to several properties along the coastal rivers. There had been heavy rain and local flooding in July and cases occurred on low lying country over the following 6 weeks.

Cattle over 12 months old were affected. They had severe watery grey-brown diarrhoea, rapid weight loss and dehydration. There was diffuse suppurative enterocolitis with flecks of pus on the mucosa, but the lesion was indistinct in autolysed specimens. In the superficial part of the mucosa, there were| dense colonies of Gram negative rods surrounded by a narrow zone of neutrophils. Infection was confined to the gut. Some animals concurrently had acute fasciolasis (consistent with their having recently grazed swampy country), or ostertagiasis/cooperiasis.

We have found Difco Yersinia selective agar with Antimicrobic Supplement CN no better than sheep blood agar and MacConkey agar for isolating Y. pseudotuberculosis from clinical cases. On blood agar, Y. pseudotuberculosis colonies are slightly smaller than E. coli, but more highly domed, whiter but with a clear margin, and not haemolytic. On MacConkey agar, they are white to pink pinpoints after 2 days culture. Some isolates are resistant to sulphonamides. Tetracyclines are most often used in the field.

Oral Dermatophilosis in Calves (J. Boulton, Wollongbar)

This disease has been diagnosed in 3 calves between 1 and 8 months old which died after several days lethargy and diarrhoea. All had granulating ulcers with raised edges on the muzzle, lips, tongue, palate and gums. Some calves also had ulcers in the oesophagus, forestomachs and rumen.

Dermatophilus-like bacteria were present in sections of oral and rumenal lesions, and there was local pyogranulomatous inflammation. One calf also had typical cutaneous dermatophilosis. Mucosal disease virus antigen was detected by GDPT in the intestinal mucosa of this animal.

It seems that Dermatophilus sp. may exacerbate the upper alimentary tract lesions of mucosa disease, especially in animals which coincidentally have cutaneous dermatophilosis.

Abortions due to Leptospira pomona have been reported from herds of cattle on the North Coast, Central Tablelands and Southwest slopes. On one Casino property this organism caused 34 abortions at 6 to 8 months gestation in a group of 136 unvaccinated heifers. The affected group had L. pomona titres up to 2700. No titres to L. Pomona or Leptospira organisms were detected in heart blood or thoracic fluid of 5 aborted foetuses. Mild focal to diffuse lymphocytosis of renal cortex was seen histologically.

On another property in the Bathurst area a number of abortions occurred in a group of 36 Hereford cows. L. pomona titres were up to 24,300. A group of 20 yearlings sent to the abattoir a month later had all kidneys condemned due to nephritis. L.pomona titres up to 2700 were present in 5 yearlings remaining on the property.

Possible sporozoan abortions in cattle: Abortion associated with multifocal granulomatous/necrotising encephalitis was diagnosed on 4 properties on the North Coast. The foetuses were 5, 5½, and 8 months. In 2 of the 4 cases there was also a mild non suppurative myocarditis. No sporozoa were detected.

Toxoplasma abortions in ewes: A group of aged pregnant Merino ewes were introduced to a property and fed hay. At the time of writing 20 ewes had lambed with only 3 live lambs. At necropsy four lambs had excess peritoneal and pericardial fluid and 2 had white pinpoint foci throughout the lungs. Histologically there were multifocal small malacic lesions with a glial cell response throughout the brain, a mild non-suppurative myocarditis and multiple small foci of fibrinous exudation and macrophage infiltration in the lungs. Very low number of sporozoan schizonts were detected in neurones associated with the malacic foci and in myocardial fibres.

Mycoplasmosis. A mortality of 15 ex 150 lambs was attributed to lactic acidosis on the basis of the history and the histological findings of chemical rumenitis. A splenic smear was submitted to the laboratory to eliminate the possibility of anthrax and when stained with polychrome methylene blue it was found to contain large numbers of mycoplasma-1ike organisms both intra and extracellulary. Consequently, the spleen was submitted to the CVL Microbiology and they succeeded in isolating Mycoplasma mycoides sub. sp. mycoides.

Osteodystrophia fibrosa . Erysipelas was diagnosed clinically as the cause for what was thought to be joint swelling in 3-month-old pigs. However, the clue to the correct diagnosis was in the diet which consisted solely of second class wheat. Post mortem examination found complete comminuted pathological fractures to be responsible for the swellings and subsequent histological examination of a variety of bones detected lesions consistent with osteodystrophia fibrosa, nevertheless the degree of peritrabecular fibrosis was not great. Unfortunately the parathyroid glands could not be located during the necropsy.

Glomerular thrombosis/haematuria. An extremely interesting histological lesion was found In the kidney of a sheep which clinically was thought to have died of oxalate poisoning. The majority of glomeruli contained a single cellular/fibrin thrombus which gave a positive reaction for fibrin in PTAH stained sections. The affected capillaries were widely dilated leading to compression of the remainder of the glomerular tuft and associated lesions in the remainder of the organ were haematuria and haemoglobinuric nephrosis. The primary cause of the lesion is unknown.

Vibrio cholera non-01 has been isolated from three cases this year. Two at Orange and one from Wagga. The first isolate was from an 18 month old Angus bull with mucosal disease. The organism was the predominant bacterium in a heavy mixed growth from the ileum and caecum of this bull which had been sick for 4 days.

Another case involved a poddy calf brought from Casino to Dubbo. The calf was found sick on a Friday with a profuse watery scour and died on Sunday. Cultures of the small intestines yielded a heavy mixed growth including Vibrio cholerae non-01 and Vibrio parahaemolyticus.

An investigation of a 15% mortality rate of 1000 ewes led to the submission of a brackish sample of dam water to the laboratory. Culture yielded a heavy mixed growth including a heavy growth of Vibrio cholerae non-01.

Vibrio cholerae non-01 are not pathogenic serogroups for man and their significance in the above cases is questionable. The finding of this organism is nevertheless of interest.

SOUTH AUSTRALIA

A. Central Veterinary Laboratory

Bovine Protozoan Abortion (Peter Phillips) Prepared by Peter Phillips.

A bovine foetus and placenta were submitted with no history other than that they had been found in a paddock on a property adjacent to Lake Alexandrina. Histological findings were a diffuse non-suppurative interstitial myocarditis and the presence of protozoan schizonts in vessels of the cotyledon of the placenta. Protozoan abortion (Sarcocystis, Hammondia?) in cattle has not been reported previously in South Australia.

Starvation of Calves (Peter Phillips)

Bobby calves being bought at market were being placed in an old stable for rearing. They lost condition and died after about 2 weeks. Pathology findings were poor condition, practically empty stomachs, dehydration, black/red rubbery wet lungs with froth in trachea and bronchi, massively distended urinary bladder and congestion of adrenal cortex. On histological study the lungs showed severe alveolar and bronchial oedema and congestion of blood vessels. Microbiological cultures were negative. There was no history of paraquat spraying or feeding with brassica plants. Starvation was diagnosed. On persistent investigation by the attending practitioner it was found that the calves were being fed twice daily with a milk replacer reconstituted at about 1/5 recommended rate to avoid diarrhoea, plus roughage. Subsequent feeding at recommended rates has resulted in normal health and growth.

Porcine Diarrhoea (Peter Phillips)

A 5 week old piglet from a litter of which 5 had died was submitted for necropsy. The history was of ill thrift followed by green diarrhoea and death within 24 hours of scouring approximately 1 week after weaning. The condition was confined to one litter in a 75 sow unit. On necropsy there were multiple abscesses in the wall of the spiral colon, at the umbilicus and one at the anterior pole of the urinary bladder {urachus}. The pus was green. A heavy growth of Corynebacterium pyogenes in a mixture of bacteria was isolated from the lesions, while a heavy growth of a mucoid E. coli was isolated from the ileum. A diagnosis of post weaning E. coli scours complicated by C. pyogenes infection was made.

Fibrocartilaginous embolism In a Great Dane (Robin Glesecke)

Severe myelonecrosis with destruction of ventral horn neurones was seen in the lower lumbar and sacral spinal cord of a 3 year old male Great Dane. Nucleus pulposis material was demonstrated In the arterioles adjacent to the central canal and plaques of cancellous bone were present in the dura mata.

The dog had collapsed while playing 4 weeks earlier. Hind limb paralysis had developed within 6 hours and urinary incontinence within 24 hours. Cytological examination of the cerebrospinal fluid had revealed no abnormalities and radiographs taken of the entire spine had not detected any injury to the vertebral disks or bodies, nor ossification within the spinal meninges. The dog was euthanased, but only the lower lumbar vertebrae and spinal cord were submitted for examination.

Chlamydia-like organisms in the gastric mucosa of a cat (Robin Glesecke)

A 5 year old female DSH cat was submitted for necropsy following a 2 week period of weight loss, lethargy and depression. A fibrino-purulent peritonitis was found on necropsy, and Calcivirus and non-haemolytic E. coli were isolated from the peritoneal fluid. The stomach was contracted, with a small amount of watery brown fluid present in the lumen. The intestinal contents were dark and tarry. Sections of the gastric mucosa showed a large number of Gram negative large coccoid bodies clustered in clear vacuoles within the mucosa1 cells. No gross or microscopic lesions were noted in the upper respiratory tract or lungs. The Chlamydiazyme test on peritoneal fluid was positive.

Positive identification of the organisms in the gastric mucosa is in progress.

A possible new storage disease in a Chihuahua (Robin Glesecke)

A 16 month old male Mexican Chihuahua was submitted for necropsy following a history of temperament changes, progressive dysmetria and blindness. A rectal biopsy had shown abnormal storage products present in ganglion cells. This material appeared structurally distinct from that seen in earlier cases of ceroid lipofuscinosis in this breed. Hydrocephalus and marked muscle wastage were noted on necropsy. Microscopically, PAS and Luxol fast blue positive granules were present in neurones throughout the brain, spinal cord, retina and gastro-intestinal tract, with the greatest concentration in neurones of the cerebellar white matter, brain stem and spinal cord.

Leucocyte, plasma and liver enzyme analyses have so far excluded GM_1 and GM_2 gangliosidosis, Gauchers Krabbe's and Niemman-Pick diseases, Mucopolysaccharidosis VII, Mucolipidoses II and III, Mannosidosis, Fucosidosis and neuramidase deficiency.

Request for information - Diseases associated with forage legumes

Robin Giesecke is interested in compiling information on proven or suspected incidents in Australia of diseases associated with grazing forage legumes - particularly the less common species i.e. Astragalus, Onybrychis, Lotus, Melilotus, Vicia. etc. Information is also welcomed on outbreaks of conditions such as 'redgut' in sheep, slobbers, photosensitisation and hyperoestrogenism where the pasture species involved can be identified. The Information is required to supplement a bibliography of world literature on toxic and undesirable factors in forage legume species originally compiled for a workshop on Alternative Forage Legumes for Southern Australia and for eventual entry into the proposed Poisonous Plant Data base. Letters requesting assistance in compiling the information will be sent to individual laboratories in the near future.

B. Diagnostic Services (Tammy Utteridge)

Drug-Associated Autoimmune Haemolytic Anaemia

An aged Great Dane was presented with a sudden onset of severe regenerative anaemia and (gastro-intestinal haemorrhage. Blood was Coombe test positive (done at C.V.L.). History revealed that the owner had run out of the anti-Inflammatory tablets supplied by her vet. for the dog's arthritic condition. A friend had told the owner that naproxen (Naprosyn) would work and she gave some to the dog. Cessation of naproxen administration resulted in recovery.

Erythrocyte Macrocytosis in Poodles

Two more cages of erythrocyte macrocytosis have been seen in poodles. (See A.S.V.P. Annual Conf. Proceedings 1984). Follow-up work s being carried out.

QUEENSLAND

Roger Kelly (Qld. Vet. School). Some interesting cases:

"Hardware disease" in a 15 month filly. This animal developed signs of peritonitis with dyspnoea and fever, and was killed after failing to respond to antibiotics. A large abscess extended through the diaphragm into the mediastinum from the antero-ventral quadrant of the abdomen, where it was bounded by adherent spleen, caecum, large colon and left lobe of liver. There was a piece of wire embedded in the liver, which had probably perforated the caecum or, possibly, the sternal flexure of the colon. The pus was foul-smelling end grew a mixed anaerobic flora.

Generalised malignant lymphoma of muscle in a dog. A clinical diagnosis of polymyositis was made in a 5 year old dog which developed weakness and muscle pain and variable limb oedema; the serum CPK levels were very high. At necropsy, there was very widespread infiltration of skeletal muscle by poorly-differentiated malignant lymphoblastic cells, and there was severe accompanying muscle necrosis. Lymph nodes in this case were not involved grossly, although there were a few malignant cells in sections.

An outbreak of neonatal cor pulmonale in a Hereford herd. A grazier in the Warwick district lost about 10% of his calf drop from November to August, out of a herd of outbred Herefords (including one from a Friesian cross heifer) all sired by the same bull. The calves at first appeared to thrive, but soon failed to follow the dam and suckle, and most died in the first 4-5 days of life. Three have been examined P.M.; the

syndrome appears to be one of alveolar disease restricting blood flow through the lungs. Right hearts were enlarged and pulmonary trunks dilated; no myocardial histopathology was noticed, apart from some fibre hypertrophy.

Bruce Hill (A.R.I.). Diagnostic highlights:

CASE 1: Piglets from Warwick showing granulomatous myositis and neuritis involving sciatic nerves and gastrocnemius muscles, probably due to injection of contaminated antibiotic.

CASE 2: Pasteurella multocida responsible for increased incidence of deaths in young piglets at Logan Village and for increase in still-births at a piggery on the Darling Downs.

CASE 3: Bovine abortion with foetal encephalitis, myocarditis and myositis usually attributed to Sarcocystis but, in this case, Sarcocystis-like organisms were present in the brain.

CASE 4: Eighteen 2-week-old calves at CSIRO, Indooroopilly. had severe scours. At autopsy Salmonella group B was isolated in pure culture from several different tissues. Eleven calves died but seven responded to treatment.

CASE 5: A cat from Dirranbandi had a granuloma in its nose. No fresh material was sent. Histologically many typical Cryptococcus neoformans organisms were seen. As this was a rare case and a zoonosis, the owner was advised to dispose of his other four cats, one of which was already sick.

CASE 6: Two hundred head of breeding cattle end calves were grazing on water couch at the Don River. Half the herd showed muscle twitching, leading to incoordination and aggressive behaviour. The field officer saw heavy fungal infection of the seed heads. This was confirmed by the Botany Department as Claviceps sp. Two weeks after the herd was moved from the water couch, the symptoms disappeared.

CASE 7: At Dayboro a goat aborted; lesions were of purulent placentitis and bronchial pneumonia. Listeria monocytogenes was isolated from lung and abomasum.

CASE 8: Pasteurella gallinarum was isolated in pure culture from a number of dressed poultry carcases , with a fibrinonecrotic panniculitis. The lesion, not evident clinically before slaughter, is only detected after the carcases are dressed.

CASE 9: Encephalomyocarditis virus infection was diagnosed histologically as the cause of mortalities in litters of piglets in an intensive piggery on the Darling Downs. The lesion was a severe acute multifocal necrotising myocarditis.

CASE 10: Campylobacter infection in pigs was diagnosed histologically on a number of occasions. Lesions consistent with porcine intestinal adenomatosis complex included regional ileitis, haemorrhagic enteropathy and intestinal adenomatosis.

VICTORIA Prepared by S. Friend

BAIRNSDALE REGIONAL VETERINARY LABORATORY (Steve McOrist)

MORTALITY IN OWLS:- Numerous free-living Barn Owls (Tyto alba) were found moribund during a 2 month period in spring 1985 over East Gippsland, Victoria. Autopsy of several owls showed depletion of fat reserves, empty stomachs and Moderate Choanotaenia sp. tapeworm and acanthocephalan infestation. A haemorrhagic gastritis with bleeding ulcers at the gizzard-proventriculus junction was seen in many birds.

Barn owls are nocturnal raptors whose sole diet is rodents, usually field mice. Their breeding was greatly enhanced by a recent mouse plague in Western Victoria, causing many owls to enter new territory in Eastern Victoria. The new territory was only inhabited for a few months. Available mice were soon consumed and many owls starved. This pattern of mortality in birds, following diminished food availability after opportunistic breeding is common to many Australian birds. Bleeding stomach ulcers may be a reaction to stress in birds.

NEW APPROACH TO INVESTIGATION OF VAGINAL DISCHARGE AND H. SOMNUS INFECTIONS IN COWS.

A guarded uterine swab for use in cows has been developed at RVL Bairnsdale in conjunction with Royal Melbourne Institute of Technology. The following is a summary of results obtained from 200 uterine and cervical swabs collected from infertile cows last year. The work was done in association with numerous practitioners, in particular Phil Poulton and Michael Larcombe. The Australian Dairy Research Committee provided funding.

METHODS:- Uterine and cervical swabs were collected from each cow. Smears were made on sterile glass slides then each swab placed in transport medium. At the laboratory smears were assessed for the presence of neutrophils and swabs were cultured aerobically and anaerobically.

THE MAJOR FINDINGS :-

1. 22% of infertile cows had metritis
   32% of infertile cows had cervicitis without metritis
   46% had no inflammation in the reproductive tract.

2. Of 91 cows with vaginal discharge, only 25% had metritis. The remaining 75% had cervicitis or vaginitis.

3. No pathogens were isolated from 60% of metritis and cervicitis cases.

4. Mixed infection with anaerobes and aerobes was the most common cause of metritis, accounting for 20% of cases.

5. H. somnus was the only significant cause of cervicitis found, being isolated from 40% of cases.

6. H. somnus only occasionally caused metritis, presumably when an ascending infection occurred in a susceptible cow.

7. H. somnus was isolated from 8% of normal uteri and lot of normal cervices.

8. Metritis did not reduce pregnancy rate, but may increase the number of matings per conception.

COMMENTS:- The effect of cervicitis on fertility is not known. The large number of sterile swabs suggests another organism, such as Ureaplasma or Chlamydia. may be responsible for metritis or cervicitis.

The low prevalence of metritis may partly explain the observation by Dohoo (Can. J. Comp. Med. 48:6. 1984) that post-breeding antibiotic infusions of repeat breeders do not increase conception rate.

In light of the above information, it is no longer reasonable to expect a laboratory diagnosis from samples of vaginal mucus from infertile cows.

A more objective diagnosis can be obtained by collection of uterine and cervical swabs and smears.

POST PARTURIENT PYOMETRA:- Most of these infections are due to a mixture of the aerobes Actinomyces (Corynebacterium) pyogenes, and microaerophilic cocci, plus the anaerobes Bacteroides spp. Fusobacterium necrophorum and Peptostreptococcus indolicus. There is little information about how this mixed infection is best treated. Also, some cases of pyometra are due to E. coli. H. somnus or other opportunists. If uterine swabs are collected from pyometra cases at the same time treatment is initiated, it is then possible to adjust treatment if sensitivity testing indicates a need.

BENALLA REGIONAL VETERINARY LABORATORY

INFECTIOUS BRONCHITIS IN PIGEONS (Kit Button)

A pigeon fancier from Kyabram had 11 racing birds die in 24 hours and lost a further 11 over the following three days. Symptoms included ruffled feathers, dyspnoea with rattling respiratory sounds, excessive mucus in the pharynx and at the beak commissures as well as an emerald-green diarrhoea. Cloacal swabs and lengths of trachea were submitted to VRI where an infectious agent inducing dwarfing and curling of embryonated eggs was isolated. Subsequent serological investigations of surviving birds from the affected loft gave low but probably significant HI titres to infectious bronchitis virus. Investigations are proceeding to further characterise the agent.

OXALATE NEPHROSIS IN RUSA DEER (Lancaster/Button)

Four adult Rusa stags died on an irrigated intensive deer farm in the Kyabram area. The stags were in rut and had been fighting. Affected individuals withdrew from the herd and took 4-10 days to die. One was noted to have bloody diarrhoea before death. Two carcasses examined post mortem had multiple petechiae and ecchymoses were present in subcutaneous tissues and on fascial and serous surfaces. The abomasum in each case was haemorrhagic with numerous erosions up to 10mm in diameter in one deer. Abomasal and intestinal contents were bloody. Both stags had multifocal hepatic necrosis (negative for Salmonella and Yersinia sp.) as well as severe diffuse nephrosis with numerous intratubular crystals which stained specifically for oxalate. Many docks (Rumex sp.) were found in the paddock where the deer had been and were grazed short.

The deaths were ascribed to trauma, hepatic necrosis and oxalate-associated nephrosis. Reduced rumenal oxalate metabolism and reduced water intake during the period of withdrawal which preceded death, could have been factors exacerbating renal malfunction and pathology.

ALGAL INFECTIONS IN FISH (Jeremy Langdon)

Filamentous and unicellular green blue-green algae occasionally parasitise fish. Usually they invade only the superficial layers of skin, gill or gut epithelia but sometimes invade deeper wounds as secondary agents.

We have seen several cases of unicellular green algae forming numerous cysts in the intestinal epithelium of tropical aquarium fish, and also an infection in farmed golden perch which was fatal in juvenile fish. The unicellular species involved include Ichythyochytrium, Chlorochytrium. Mucophilus and Chlorella amongst the green algae, end the blue-green alga Anacystis whereas Cladophora appears to be the main filamentous species. Detection is by histopathology, using PAS and iodine stains to demonstrate the cell wall and starch granules.

There are no reports of treatment but simazine or copper sulphate may be worth a try. The infections are often self-limiting but can be fatal in juvenile fish.

SEASONAL MORTALITIES IN BONY BREAM (Jeremy Langdon)

Winter or early spring 'die-offs' or 'kills' in bony bream (Nematalose erebi) appear to be common in inland and coastal waters. They are often associated with low temperatures which may retard the fish's immune response or accelerate growth and reproduction of parasites. Various pathogens may then produce clinical disease as secondary agents. In cases where winter water temperatures fall below 10°C in Central and Southern Australia, these include the fungus Saprolegnia and the protozoan ectoparasite. Chilodonella. This latter agent was responsible for seasonal mortalities in the Finke River near Alice Springs investigated by the AFHRL. Bony bream kills of unknown cause also occur, however, in late autumn in the Northern Territory, when water temperatures range from 14 to 16°C.

LEVAMISOLE TOXICITY IN GOATS (Rob Rahaley/Mick Shiel)

Following drenching with a concentrated levamisole preparation, 3 of 6 goats died within 24 hours. Clinical signs were non-specific.and there were no significant post mortem lesions in one goat examined. Investigations revealed that the drenching gun used was inaccurate and actually delivered 5 times the indicated dose. Goats are quite susceptible to levamisole toxicity and the concentrated preparations should be used with extreme caution.

SCHOOL OF VETERINARY SCIENCE MELBOURNE

SEA BIRD DEATHS IN PORT PHILLIP BAY (Karl Harrigan)

Significant mortalities of Little Penguins and diving petrels have occurred recently in Port Phillip Bay. Of those examined, all appeared to be mature birds. In the diving petrels the gonads of both male and female birds seemed to be at or close to their maximum pre-breeding development. Both species appeared to have died of starvation, there being essentially no fat reserves present in any of the carcasses. Skeletal muscles were atrophied. Gastro-intestinal tracts were empty except for the presence of brown-black fluid in the stomachs of almost all of these birds. Black melena-like content was present in their lower intestines. Both the stomach fluids and the intestinal contents provided positive reactions to occult blood tests ("Haematest"). However, in most birds there was little or no evidence of gastro-intestinal erosion or ulceration and very few parasites were present. It has been suggested that this gastric haemorrhage may be the result of severe debilitation and stress. To date, chemical analyses on Port Phillip Bay sea water, "foam" and penguin tissues have proved unrewarding.

OVINE PARASITISM (Jan Spillman)

Over the last two months, a number of sheep were presented to the V.C.C. with extremely high parasite burdens. Typical clinical signs were illthrift, weight loss and scouring. Total worm counts ranged from 20,000 to 80,000 in most sheep, and were predominantly Trichostrongylus and Ostertagia sp., many of which were immature.

Very heavy lung worm (Dictyocaulus filaria) infestations with severe bronchopneumonia were present in these sheep. Also a number of six week old lambs had very high larval burdens and high oocyst counts. Although most sheep were less than one year of age, a significant number were older. Factors contributing to the severe parasite burdens included mismothering, concurrent disease, lambing, missed drenches and the introductions of new animals into the mob.

DIARY OF COMNING EVENTS.

17th-18th May, 1986 - Annual Conference ASVP Veterinary School, University of Queensland, Brisbane.

17th-20th September, 1986 - International Meeting of Veterinary Pathology, Cordoba, Spain.

May, 1987 - Post-graduate Refresher Course on Gross Pathology, University of Sydney.

16th-21st August, 1987 - World Veterinary Congress, Montreal, Canada.