Staff: Professor : J. D. Smyth, M.A. Sc.D. Dub.
Reader : W. L. Nicholas, B.Sc. Ph.D. Liv. (on study leave for 1966)
J. A. Clegg, B.Sc., Ph.D. Lond.
R. E. Barwick, M.Sc. N.Z., Ph.D. A.N.U.

Lecturers : C. Bryant, M.Sc., Ph.D. Lond.
V. A. P. Harris, B.Sc., Ph.D. Lond.
T.G. Marples, M.Sc. N.Z., Ph.D. Georgia
D. Morseth, B.A. Minn., Ph.D. N.Z.

Senior Demonstrators : W. H. Ewers, B.Sc. Adel., M.Sc., N.S.W.

Research Assistants : Helen J. Miller, B.Sc. N.E.
S. Neser, M.Sc. Transvaal
Phillipa Croucher, B.Sc.

Museum Assistant : R. Pengilley, B.Sc.

Accommodation:

The large numbers of students continuing into the second year 'A' and 'C' courses here have put severe strain on laboratory accommodation during the year. The 'C' course in particular, which deals with the 'core' content of modern biology - histochemistry, cell biochemistry, genetics, cell biology - requires much advanced and sophisticated standing (i.e. non-movable) apparatus and consequently more laboratory space. This is creating special problems. The demand for this course appears to be so great that limitation of numbers is likely to be necessary in future years.

The year also saw the start - but not the completion - of the Zoology/Psychology Animal House, a building which has been on the drawing board since 1961, and which has suffered many setbacks. It is expected that it should now be completed by February, 1967.
A first year laboratory to seat 50 students was completed as the first stage in the completion of the basement of the present unfinished building. The full completion of the basement which will provide much-needed seminar rooms, class rooms, laboratories, workshops and special purposes laboratories, as well as additional space for research students, is now predicted for 1968.

Enrolments and Examinations:

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<thead>
<tr>
<th>Course</th>
<th>Enrolments</th>
<th>Sat for Examination</th>
<th>Passed</th>
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<tr>
<td>Zoology I</td>
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<td>Biological Science AII</td>
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<td>28</td>
<td>24</td>
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<td>&quot;</td>
<td>AIII</td>
<td>16</td>
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<td>CII</td>
<td>42</td>
<td>39</td>
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<td>Ph.D.</td>
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</tbody>
</table>

Teaching Activities:

The most remarkable aspect of the teaching activities of the year was the very high enrolments in the new Biological Sciences 'C' course, the second year of which was more than twice the predicted enrolments. Enrolments in the third year of this course, CIII, were also high and it is pleasing to note that a substantial number of students taking this course (which deals with most aspects of modern cellular and molecular biology) were passing into School Teaching.

Conferences:

The Department acted as hosts to the Australian Society of Parasitology in May and a very successful meeting was held. Professor Smyth was invited to attend a W.H.O. Specialist Committee Group on Hydatid Disease in Geneva but at the last moment was unable to attend on account of illness.

Research:

The research interests of the staff and post-graduate students are so extensive that it is not possible to comment on them in detail. Their range is reflected in the list of publications attached; the majority of these have been published in international biological and biochemical journals.

The demand for bench space for post-graduate workers continues to be very high. More than 50 enquiries from prospective Ph.D. students were received during the year and only the acute shortage of scholarships and space prevented a further development of the research activities of the Department. It is hoped that steps to increase the number of post-graduate scholarships will be taken, so as to prevent candidates of good quality - including many of our own graduates, being turned away.
The Department continued to receive substantial financial aid from outside sources. These include:

- The Australian Wool Board,
- Rural Credits Development Fund,
- C.S.I.R.O.,
- World Health Organization,
- South African Government,
- Australian Universities Research Grants Committee,
- U. S. National Institutes of Health.

The largest grant received during the year was one of $39,000 from the Rural Credits Development Fund for research on the physiology of parasites. This brings the total of grants received by the Department, from sources outside the University (and much of it outside Australia) since its establishment in 1959, to $162,000.

Visitors:
- Professor R. C. Stebbins, Museum of Vertebrate Zoology, Berkeley, U. S. A.
- Professor S. Charles Kendeigh, University of Illinois, U. S. A.
- Dr. G. D. Alcorn, University of Puget Sound, Washington, U. S. A.
- Professor J. Sprent, University of Queensland.
- Professor Stott, University of New England.

Publications

BARWICK, R.E., BRYANT, C. 'Physiological and biochemical aspects of hibernation in the scincid lizard Eternia cunninghami (Gray, 1832)' *Physiological Zoology, 32*, 1-30.


BRYANT, C., HINES, W.J.W. 'The effects of salicylate on guinea pig testis mitochondria compared with effects of aging and repeated washing'. *Biochemical Pharmacology, 15*, 119-121.

BRYANT, C., NICHOLAS, W.L. 'Studies on the oxidative metabolism of Moniliformis dubius (Acanthocephala)' *Comparative Biochemistry and Physiology, 17*, 825-840.


† Not a member of this University.


CHEAH, K.S., BRYANT, C. 'Studies on the electron transport system of Monezia expansa (Cestoda).'. Comparative Biochemistry and Physiology, 19, 197-223.


* Left the Department since.
HOWKINS, A.B. 'Hydatid disease in New South Wales', Medical Journal of Australia, 1, 486.

HOWKINS, A.B. 'Epidemiology of hydatid disease in Eastern New South Wales'. 1. Incidence and geographical distribution in Ovines'. The Australian Veterinary Journal, 42, 238.

HOWKINS, A.B. 'Epidemiology of hydatid disease in Eastern New South Wales. 2. Reports of Incidence in Macropodidae and other possible intermediate hosts'. The Australian Veterinary Journal, 42, 373.

HOWKINS, A.B. 'The Role of Macropodidae in Tasmania as intermediate hosts of Hydatid disease', The Australian Veterinary Journal, 42, 240.

MARPLES, T.G. ** 'A Radionucleotide tracer study of Arthropod food chains in a Spartina salt marsh ecosystem', Ecology, 47, 270-277.

MORSETH, D.J.* 'Chemical Composition of Embryophoric Blocks of Taenia hydatigena, Taenia ovis and Taenia pisiformis Eggs'. Experimental Parasitology, 18, 347-354.

NICHOLAS, W.L., JANTUNEN, R.* 'The effect of different concentrations of oxygen and of carbon dioxide on the growth and reproduction of Caenorhabditis briggsae (Rhabditidae)'. Nematologica 12, 328-336.

SMITH, G.T. 'Observations on the Life History of the Scorpion Urodacus abruptus Pocock (Scorpionidae) and an analysis of its home sites', Australian Journal of Zoology, 14, 363-396.

SMYTH, J.D. 'Studies in Tapeworm Physiology XI. In vitro cultivation of Echinococcus granulosus from protoscolex to the strobilate stage', Parasitology, 56, 763-766.


** Based on work done prior to joining this University.

* Left the Department since.
SMYTH, J.D., HOWKINS, A.B., BARTON M.*
'Factors controlling the differentiation of the Hydatid Organism Echinococcus granulosus into cystic or strobilar stages in vitro', Nature, 211, 1374-1377.


WAGNER, R.H.†, MARPLES, T.G.** 'The Breeding success of various passerine birds under chronic gamma irradiation stress' The Auk, 82, 437-440.

WARING, H.†, MOIR, R.J.†, TYNDALE-BISCOE, C.H. 'Comparative physiology of Marsupials', Advances in Comparative Physiology and Biochemistry, 2, 237-376.


* Left the Department since.
‡ Not a member of this University.
** Based on work done prior to joining this University.