THE AUSTRALIAN NATIONAL UNIVERSITY
FACULTY OF SCIENCE
DEPARTMENT OF ZOOLOGY

ANNUAL REPORT 1965

Staff:  Professor:  J.D. Smyth, M.A. Sc.D. Dub.
         Senior Lecturers:  A.H. Weatherley, B.Sc. Syd.,
                              M.Sc. Tas., Ph.D. Glas.
                              J.A. Clegg, B.Sc., Ph.D. Lond.
                              C.H. Tyndale-Biscoe, M.Sc., N.Z.,
                              Ph.D. W. Aust.
            Lecturers:  R.E. Barwick, M.Sc. N.Z.,
                       C. Bryant, M.Sc., Ph.D., Lond.
                       V.A.P. Harris, B.Sc., Ph.D. Lond.
                                W.H. Ewers, B.Sc. Adel., M.Sc.,
                                N.S.W.
     Research Assistants:  Ritva Sands, Cand. phil. Helsinki
                           Judith W. Fletcher, B.Sc. Adel.
                           Mary Barton, B.Sc. Lond.

Accommodation:

The Department has now completed its first year in its new building. The greatly improved facilities for teaching and research have been very much appreciated by staff and students. The building is however, still uncompleted and some restrictions on enrolments in Zoology I and Biological Sciences will be necessary in 1966 owing to shortage of laboratory facilities, the completion of which is envisaged in the next Triennium.

During the year, part of the old temporary buildings used as an Animal House was vacated to provide room for the Student Administration. A building previously used as a Magnetometer Building (by Geophysics) has been converted for use as a temporary Animal House pending the construction of permanent facilities.
Enrolments and Examinations:

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<tr>
<th>Course</th>
<th>Enrolments</th>
<th>Sat for Examination</th>
<th>Passed</th>
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<tr>
<td>Zoology</td>
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<td>Biological Sciences AII</td>
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<td>Ph.D.</td>
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Teaching Activities:

Enrolments were substantially higher than predicted. This was especially in the recently established Biological Science Course C (essentially cell biology), which is run jointly with the Botany Department. This situation undoubtedly reflects a worldwide trend of interest in Biological Sciences based on the spectacular advances in molecular biology and biophysics.

Conferences and Overseas visits:

Professor Smyth attended a conference on "Helminth Specificity" in Tatranska Lomnica, Czechoslovakia, organised by the Slovak Academy of Sciences, and read a paper there. The opportunity was also taken to visit research establishments in that country.

Several members of staff attended A.N.Z.A.A.S. at Hobart and read papers.

Research:

Research projects undertaken by members of staff and post-graduate students during the year are now too extensive to receive individual comment. A list of published work is appended. The main lines of research continued to be: histochernistry, metabolism and in vitro culture of parasitic helminths, reproductive physiology and ecology of vertebrates and invertebrates.

Research Grants:

Substantial research grants were received from outside sources, these include: Australian Wool Board, United States National Institutes of Health, Rural Credits Development Fund, C.S.I.R.O., World Health Organization, and the South African Government.
BRYANT, C.

'The metabolism of the digestive glands of two species of marine gastropod (Melanerita melanotragus and Austrocochlea obtusa).'. Comparative Biochemistry & Physiology 14, 223.

BRYANT, C., NICHOLAS, W.L.

'Intermediary metabolism in Moniliformis dubius (Acanthocephala).'. Comparative Biochemistry & Physiology 15, 103.

BUSTARD, H.R.

'Reproduction in the Australian rain forest skinks, Siaphos equalis and Sphenomorphus tryoni.' Copeia, 51, 4, 775-6, 1964.


'Coleonyx variegatus variegatus (Baird) with two pairs of postanal spurs.' British Journal of Herpetology 3, 8, 208-9 1965.

CLEGG, J.A.

'In vitro cultivation of Schistosoma mansoni.' Experimental Parasitology 16, 133-147.

'Secretion of Lipoprotein by Mehlis' Gland in Fasciola Hepatica.' Annals of the New York Academy of Science 118(24), 969-986.

DIXON, K.E.

'The structure and histochemistry of the cyst wall of the metacercaria of Fasciola hepatica L.' Parasitology 52, 215-225.

DIXON, K.E., MERCER, E.H. £

'The fine structure of the cyst wall of the metacercaria of Fasciola hepatica.' Quarterly Journal of Microscopical Science 103, 389-9.

£ Member of the Department of Electron Microscopy, J.C.S.M.R.


EWERS, W.H.**  'An analysis of the molluscan hosts of the trematodes of birds and mammals and some speculations on host-specificity.' Parasitology 24, 571-578.

EWERS, W.H.**  'The influence of the density of snails on the incidence of larval trematodes.' Parasitology 24, 579-583.


HUGHES, R.D., WALKER, D.  'Education and training in Ecology' 'Veestes' Australian Universities Review Vol. 8, No.3.

HUGHES, R.D., CARVER, MARY ‡, CASIMIR, M. ‡, O'LOUGHLIN, G.T. ‡, MARTYN, E.J. ‡  'A comparison of the numbers and distribution of aphid species flying over Eastern Australia in two successive years.' Australian Journal of Zoology 13 (3).


** Based on work done prior to joining this University.
‡ Not a member of this University.
NICHOLAS, W.L., MERCER, E.H. *


NICHOLAS, W.L., GRIGG, HELEN *


NICHOLAS, W.L., JANTUNEN, RITVA *

'Caenorhabditis briggsae (Rhabditidae) under anaerobic conditions.' Nematologica 10, 409 (1964).

RAI, S.L. **


SMYTH, J.D.


WEATHERLEY, A.H.


WOOLLEY, PATRICIA, NUTTING, W.†

'Pathology in Antechinus stuartii (Marsupialia) due to Demodex sp.' Parasitology 55, 383-389.

* A member of the Department of Electron Microscopy, J.C.S.M.R.
** Based on work done prior to joining this University.
† Not a member of this University.