Kikkawa, J. (1970). Birds recorded at Heron Island. *Sunbird* **1**: 34–48.

Kikkawa, J. (1976). The Birds of the Great Barrier Reef. In 'Biology and Geology of Coral Reefs Volume III.' (Eds R. Endean and O. A. Jones) Pp. 279–341 (Academic Press: New York.)

MacGillivray, W. (1928). Bird-life of the Bunker and Capricorn Island. *Emu* **27**: 230–249.

Mather, P. and Bennett, I. (Eds) (1984). 'A Coral Reef Handbook: A guide to the fauna, flora and geology of Heron Island and adjacent reefs and cays.' (The Australian Coral Reef Society: Brisbane.)

Ogden, J. (1979). Estimates of the population sizes of the Black Noddy and Wedge-tailed Shearwater at Heron Island in 1978. *Sunbird* **10**: 33–39.

Ogden, J. (1993a). On Cyclones, *Pisonia grandis* and the mortality of Black Noddy *Anous minutus* on Heron Island. *Emu* **93**: 281–283.

Ogden, J. (1993b). Population increase and nesting patterns of the black noddy *Anous minutus* in *Pisonia* forest on Heron Island: observations in 1978, 1979 and 1992. *Aust. J. Ecol.* **18**: 395–403.

Shipway, A. K. (1969). The numbers of terns and shearwaters nesting on Heron Island in 1965. *Emu* **69**: 108–109.

LITERATURE REVIEW

Compiled by B.Baker

This section is compiled from journals which are often not available to non-professional ornithologists in Australia. The following criteria are used to select papers for review:

- They relate to species which occur in Australia and its Territories;
- They provide details of techniques and equipment that may be of use in Australia;
- They provide details of studies that may be of general interest to Australian ornithologists.

This Literature Review is a selection taken from the following journals: *American Zoologist, Animal Behaviour, Auk, Australian Bird Watcher, Bird Conservation International, Bird Study, Canadian Journal of Zoology, Canberra Bird Notes, Conservation Biology, Emu, Israel Journal of Zoology, Journal of Field Ornithology, Journal of Raptor Research, Journal of Wildlife Management, Journal of Zoology London, North American Bird Bander, RAOU Conservation Statement, RAOU Vic. Group Newsletter, South Australian Ornithologist, Stilt, Wildlife Research.*

PLUMAGES, MOULT AND MORPHOMETRICS

Red-capped parrot *Purpureicephalus spurius*: moult, age and sex determination. Mawson, P. R. and Massam, M. C. (1996). *Emu* **96**: 240–244. (Describes an underwing stripe and other plumage characteristics that enable age and sex to be determined in the hand.)

Terminology in molt and wing feathers: use of descendant, ascendant, and lesser coverts. Winkler, R. and Jenni, L. (1996). *Auk* **113**: 968–969. (The incorrect or imprecise use of the terms 'descendant' and 'ascendant' to describe wing moult creates confusion and the authors suggest that others report the order of numbering and the moult of remiges in a more descriptive manner.)

Weights and pre-migratory mass gain of the Red-necked Stint *Calidris ruficollis* in Victoria, Australia. Rogers, K. G., Rogers, D. I. and Minton, C. D. T. (1996). *Stilt* **29**: 2–23. (Stints weigh about 28 gm on arrival in Victoria in spring, and recover to about 29–31 gms quickly. This is maintained through the austral summer, but in March-April adults undergo rapid pre-migratory mass gain. Departure mass is about 40 gms.)

TECHNIQUES AND ANALYSES

Investigation of bird movements using the Australian Bird Count: a pilot study based on the silvereye, *Zosterops lateralis*. Griffioen, P. (1996). *Graduate Diploma of Zoology Thesis,* La Trobe University: Victoria, Australia. (The ability of the ABC data to reveal currently unknown silvereye movement patterns was examined, and methods for mapping the data were developed. In addition to the known migration of Tasmanian silvereyes to the mainland, Victorian birds appear to appear to migrate to both South Australia and the New South Wales/Queensland regions.)

Short-range high-precision surveillance of nocturnal migration and tracking of single targets. Bruderer, B., Steuri, T. and Baumgartner, M. (1995). *Israel Journal of Zoology* **s**: 207–220. (Summarises the possibilities and limitations in the application of different radar types for bird research.)

Long-range surveillance radars as indicators of bird numbers aloft. Buurma, L. S. (1995). *Israel Journal of Zoology* **41**: 221–236. (Selection of altitude and track direction in relation to landscape, wind and flight phase appears to be the key issue.)

The use of satellite systems for the study of bird migration. Fuller, M. R., Seegar, W. S. and Howey, P. W. (1995). *Israel Journal of Zoology* **41**: 243–252. (Reviews sattelite tracking technology used in avian studies.)

New trends and capabilities of satellites for bird tracking and monitoring. Ginati, A., Lehmann, G. and Schulz, U. (1995). *Israel Journal of Zoology* **41**: 253–259. (Two advanced satellite tracking systems are described.)

Satellite tracking of white-naped crane migration and the importance of the Korean Demilitarized Zone. Higuchi, H., Ozaki, K., Fujita, G., Minton, J., Ueta, M., Soma, M. and Mita, N. (1996). *Conservation Biology* **10**: 806–812. (Satellite tracking of 15 cranes identified the migration route of these birds and important stopover sites.)

Biases in diet study methods in the Bonelli's Eagle. Real, J. (1996). *Journal of Wildlife Management* **60**: 632–638. (Compared three methods of studying diets with the delivered prey by eagles at two nests. Methods compared were: 1. recent prey present in the nest; 2. remains collected in the nest after breeding; and 3. pellet contents. Pellet analysis was the most efficient method of monitoring the diet of Bonelli's eagle.)

CONSERVATION

Conserving woodland birds in the wheat and sheep belts of southern Australia. Robinson, D. and Traill, B. J. (1996). *RAOU Conservation Statement No. 10.* RAOU: Melbourne. (The temperate woodlands are the most threatened type of wooded ecosystem in Australia, and more than 80% has been cleared since European settlement. Twenty-five species are threatened, one extinct, and at least 25% of woodland birds are in decline.)

Predation on artificial nests in forested riparian buffer strips. Vander Haegen, W. M. and Degraff, R. M. (1996). *Journal of Wildlife Management* **60:** 542–550. (Nests in riparian buffer strips were depredated more often than those in intact riparian forests. Greater predation rates in riparian buffer strips probably resulted from an elevated number and diversity of predators associated with the narrow, linear forest stands. Recommends that wide (>150 m) buffer strips should be left along riparian zones to reduce edge-related nest predation.)

EFFECTS OF MARKING and RESEARCH TECHNIQUES

Influence of brood rearing on female Mallard survival and effects of harness-type transmitters. Bergmann, P. J., Flake, L. D. and Tucker, W. L. (1994). *Journal of Field Ornithology* **65:** 151–159. (No effects from transmitters, but birds with broods appear to have lower survival.)

To band or not to band: is that the question? Pywell, S. and Weston, M. (1996). *RAOU Vic. Group Newsletter* **39:** 1–3. (This and the following reference are responses to a paper discussing ethical considerations of banding birds, and the effects of banding on behaviour and conservation.)

Why I no longer band birds — a reply. Menkhorst, P. (1996). *RAOU Vic. Group Newsletter* **39:** 3–4.

Leg bands cause injuries to parakeets and parrots. Meyers, J. M. (1994) *North American Bird Bander* **19:** 133–136. (Flat aluminium bands caused injuries, round stainless steel bands did not. Leg bands for parrots should be made of stainless steel or another hard alloy, narrow in height <50% of tarsus length.)

Reproductive success and symmetry in zebra finches. Swaddle, J. P. (1996). *Animal Behaviour* **51:** 203–210. (Symmetrically banded males produced more offspring that survived past the period of parental care than males in asymmetric treatments. This appeared to be the effect of female choice processes and female-based parental investment and not male intra-sexual dominance.)

Thermoregulatory effects of radiotelemetry transmitters on mallard ducklings. Bakken, G. S., Reynolds, P. S., Kenow, K. P., Korschgen, C. E. and Boysen, A. F. (1996). *Journal of Wildlife Management* **60:** 669–678. (Compared thermal responses of untreated one-day-old mallards to ducklings carrying external sutured backpack or subcutaneously implanted transmitters, to investigate if transmitter attachments disrupt downy insulation and hence possibly survival.)

RAPTORS

Effect of nest-box size on nest-site preference and reproduction in American kestrels. Bortolotti, G. R. (1994). *Journal of Raptor Research* **28:** 127–133. (*Falco sparverius* preferred nest boxes over ubiquitous natural cavities. Boxes did not influence population density. Kestrels strongly preferred larger boxes, but still chose boxes over cavities when only small boxes were available.)

Morphometric comparisons of two sympatric Goshawks from the Australian wet tropics. Burton, A. M. and Alford, R. A. (1994). *Journal of Zoology London* **232:** 525–538. (Grey Goshawk, Brown Goshawk.)

The duration of the post-fledging dependence period of ospreys *Pandion haliaetus* at Loch Garten, Scotland. Bustamante, J. (1995). *Bird Study* 42: 31–36. (Post-fledging dependence lasted an average of 30.4 days. The adult female was usually the first to disappear from nesting area, followed by fledglings and then the AM.)

Optimal foraging in the Australian Kestrel *Falco cenchroides* in relation to population fluctuations of the house mouse *Mus domesticus* in an intensively cultivated agricultural ecosystem. Hesbrook, R. (1995). BSc.Honours thesis, Queensland University of Technology. (Fluctuations in kestrel numbers were correlated with changes in mice abundance.)

The breeding biology and diet of the Masked Owl *Tyto novaehollandiae* near Eden, New South Wales. Kavanagh, R. P. (1996). *Emu* **96:** 158–165. (Results of 3 breeding attempts indicate laying occurred late March to mid July. Habitat was dry open-forest in rugged terrain interspersed with narrow bands of tall wet riparian forest.)

Copulatory behaviour and paternity determined by DNA fingerprinting in kestrels: effects of cyclic food abundance. Korpimaki, E., Lahti, K., May, C. A., Parkin, D. T., Powell, G. B., Tolonen, P. and Wetton, J. H. (1996). *Animal Behaviour* **51:** 945–955. (In Falco tinnunculus EPC's only 1% of copulations. Within pair copulation frequency higher in a season of increasing food abundance and males spent more time mate guarding. EPP revealed in 7% of 27 broods and 5% of 112 offspring.)

Influence of reduced food availability on growth of captive American kestrels. Lacombe, D., Bird, D. M. and Hibbard, K. A. (1994). *Canadian Journal of Zoology* **72:** 2084–2089. (When prey availability is reduced by as much as 30%, nestlings grow more slowly and store less fat, which could lead to poorer postfledging survival. Nestlings fed a reduced diet fledged at same age as nestlings fed ad libitum.)

Observations on the biology of the Powerful Owl *Ninox strenua* in southern Victoria. McNabb, E. G. (1996). *Australian Bird Watcher* **16:** 267–295. (Home range of 2 pairs estimated as c.300 ha. Breeding success 1.4 young pa and 94% nesting success. Fledglings dependent 6–7 months from fledging.)

Facts and artefacts in nest-box studies: implications for studies of birds of prey. Moller, A. P. (1994). *Journal of Raptor Research* **28:** 143–148. (Boxes frequently provided at unnaturally high densities, may have important implications for interpretation of current knowledge because much of the information is derived from nest-box studies.)

Re-establishment of an endangered subspecies: the Norfolk Island Boobook Owl *Ninox novaeseelandiae undulata*. Olsen, P. D. (1996). *Bird Conservation International* **6**: 63–80. (By 1995, 11 owls existed from a re-establishment programme *in situ* based on hybridising the last surviving NI owl with specimens of the New Zealand subspecies.)

Niche partitioning by two sympatric goshawks in the Australian wet tropics: breeding-season diet. Burton, A. M. and Olsen, P. (1997). *Wildlife Research* **24**: 45–52. (Brown Goshawk diet contained more birds than did that of the Grey Goshawk, which preyed more on medium-sized mammals and reptiles. The proportion of insects was similar in both species. Grey Goshawks preferred terrestrial and arboreal prey to the brown.)

Skewed sex ratios in Cooper's hawk offspring. Rosenfield, R. N., Bielefeldt, J. and Vos, S. M. (1996). *Auk* **113**: 957–960. (Sixteen years of data indicated that sex ratios of offspring at fertilization, and at the nestling and fledgling stages, were significantly and consistently skewed toward males.)

Effects of aging and mate retention on reproductive success of captive female peregrine falcons. Clum, N. J. (1995). *American Zoologist* **35**: 329–339. (Birds with prior breeding experience had higher productivity than inexperienced birds, productivity increased with pair experience, and dropped by 53% when females changed mate. Lifetime reproductive success was not correlated with longevity as birds with high egg production had shorter lifespans.)

The insurance-egg hypothesis and extra reproductive value of last-laid eggs in clutches of American Kestrels. Wiebe, K. L. (1996). *Auk* **113**: 258–261. (Despite variation in food supply, the proportion of broods in *Falco sparverius* in which the last hatched nestling survived was similar across a number of years. Reviews three hypotheses for hatching more young than normally raised.)

DNA fingerprinting reveals polygyny in the Lesser Kestrel *(Falco naumanni)*. Tella, J. L., Negro, J. J., Villarroel, M., Kuhnlein, U., Hiraldo, F., Donazar, J. A. and Bird, D. M. (1996). *Auk* **113**: 262–265. (Reports a case of nest sharing polygyny where two females laid eggs in the same nest and DNA fingerprinting analysis showed the attending male had fathered all four nestlings.)

Absence of blood-parasitization effects on Lesser Kestrel fitness. Tella, J. L., Forero, M. G., Gajon, A., Hiraldo, F. and Donazar, J. A. (1996). *Auk* **113**: 253–256. (Parasite prevalence in *Falco naumanni* population studied (3.17%). is much lower than that shown in other avian hosts. Blood parasitization does not appear to affect individual fitness of kestrels given that there is no apparent reduction of clutch size.)

AUSTRALIAN SPECIES

Mitochondrial DNA sequence variation among the subspecies of sarus crane *(Grus antigone)*. Wood, T. C. and Krajewski, C. (1996). *Auk* **113**: 655–663. (Sarus cranes probably colonized Australia during the late Pleistocene.)

Geographical differentiation in the Channel-billed Cuckoo *Scythrops novaehollandiae* Latham, with description of two new subspecies from Sulawesi and the Bismarck Archipelago. Mason, I. J. and Forrester, R. I. (1996). *Emu* **96**: 217–233. (Marked sexual dimorphism in size recorded in all regions, with exception of the Bismarck Archipelago. Three subspecies recognized.)

Diet and foraging behaviour of red-browed finches *Neochmia temporalis* near Newcastle, New South Wales. Todd, M. K. (1996). *Emu* **96**: 245–249. (No variation in diet between age classes was evident.)

Home range, habitat and behaviour of the masked owl *Tyto novaehollandiae* near Newcastle, New South Wales. Kavanagh, R. P. and Murray, M. (1996). *Emu* **96**: 250–257. (Over 14 months a pair showed high site fidelity. Home range of the female determined by radio-tracking was 1 017 to 1 178 ha. She spent 82% of her time in or adjacent to extensively modified environments. Diet mainly introduced species of small terrestrial rodents.)

Observations of a breeding colony of four pairs of regent honeyeaters at north Watson, Canberra, in 1995–96. Bounds, J., Brookfield, M. and Delahoy, M. (1996). *Canberra Bird Notes* **21**: 41–55. (Eight young were fledged from seven nesting attempts. One pair was successfully parasitized by pallid cuckoos.)

Large flock of scarlet-chested parrots in the Great Victoria Desert. Stewart, D. A. and Shephard, M. D. S. (1996). *South Australian Ornithologist* **32**: 107–109. (Adds new information on the feeding habits of *Neophema splendida* and provides the first documentation of sonagrams for this species.)

Revision of the distribution of the red-lored whistler in South Australia. Matthew, J., Carpenter, G. and Croft, T. (1996). *South Australian Ornithologist* **32**: 103–107. (Summarises records in South Australia since 1983, reports on a recently discovered population on Eyre Peninsula and compares habitat utilization with that of the species in the Murray Mallee.)

GENERAL INTEREST

Foraging ecology of a Mulga bird community. Recher, H. F. and Davis, W. E. (1997). *Wildlife Research* **24**: 27–43. (Describes the foraging behaviour and habitat use of a mulga avifauna near Alice Springs during late winter. Ground-foraging species dominated the avifauna, but in most respects the guild structure was a scaled-down version of Eucalyptus forest avifaunas.)

Effects of edge type and patch shape on avian communities in a mixed conifer-hardwood forest. Hawrot, R. Y. and Niemi, G. J. (1996). *Auk* **113**: 586–598. (Forest management strategies must consider not only stand characteristics, but also the edges created between these stands.)

Common myna movement. Nicholls, A. O., Nicholls, J., Clayton, M. and Davey, C. (1996). *Canberra Bird Notes* **21**: 62. (Records a movement of 9.5 km for *Acridotheres tristis*.)

Bird mortality with power assets project. Phase 2 Report. Hess, J. F. (1996). *Unpublished report to Hydro Electric Commission, Tasmania.* (Contains a bibliography of bird mortality associated with powerline strike. Reports on studies of bird behaviour to assess mitigation devices and development of guidelines to assist with planning and configuration of powerline design.)