

## LITERATURE REVIEW

Compiled by D. Purchase and 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.

**Journals perused:** *Ardea* 80, *Auk* 109, 110; *Biological Conservation* 55, *Birding in Southern Africa* 44; *Condor* 95, 96; *Ecological Abstracts* 1994; *Journal of Field Ornithology* 64, 65; *Journal of Wildlife Management* 58; *L'Oiseau RFO* 62, *Living Bird* 11, *N. Amer. Bird Bander* 17; *Orn. Anz.* 31; *Ornis Beob.* 89; *Ornis Fennica* 68, 69; *Ostrich* 63; *Notornis* 38, 39; *Ringling and Migration* 13; *Safring News* 22; *Stilt* 24, *Victorian Naturalist* 111; *Wildlife Research* 20, 21; *Wilson Bulletin* 104, 105, 106

### GENERAL INTEREST

**Experimentally induced infanticide: the removal of birds and its ramifications.** Beckoff, M. (1993). *Auk* 110: 404–406.

**Ethics and experimentation: hard choices for the field ornithologist.** Emlen, S. T. (1993). *Auk* 110: 406–409. (This and the preceding paper examine the ethics of research on animals where experimental studies are testing hypotheses that predict possible killing or maiming as a result of the manipulations.)

**Extra-pair paternity in the European Starling: the effect of polygyny.** Smith, H.G. and Von Schantz, T. (1993). *Condor* 95: 1006–1015. (Eight of 92 nestlings from 22 nests were the result of extra pair fertilizations.)

**Simultaneous mass starvation of wintering diving ducks in Switzerland and The Netherlands: a wrong decision in the right strategy?** Suter, W. and Van Eerden, M. R. (1992). *Ardea* 80: 229–242. (Following an exceptional cold spell, between 2700 and 6200 diving ducks died from starvation along the Rhine in Switzerland, and over 14000 died in the Dutch Waddenzee. Both are important wintering sites and instead of moving away, birds remained and starved. This inadequate reaction may be explained by a migration strategy which does not take into account extremely long cold spells in winter, since the probability of such events is very low.)

**Influence of the building of the TGV-Atlantic line on the birds of the Dourdan forest (91).** Cuisin, M. (1992). *L'Oiseau RFO*. 62: 12–27. (Twelve hectares on the outskirts of the 897 h forest were felled to build the railway. There was little adverse effect on the bird population of the remaining forest. In French with English summary.)

**Bird blood parasites — a new dimension to bird ringing.** Earle, R. A. (1993). *Safring News* 22: 5–9. (A discussion on the role blood parasites play in the life and death of birds.)

**Seasonal variation in gene frequencies in the House Sparrow (*Passer domesticus*).** Bates, J. M. and Zink, R. M. (1992). *Auk* 109: 658–662. (The authors tested the null hypothesis that recruitment and over-winter survival in a House Sparrow population at Baton Rouge, USA, was independent of an individual's genotype at 29 allozyme loci.)

**Dynamics of Finnish Starling *Sturnus vulgaris* populations in recent decades.** Solonen, T., Tiainen, J., Korpimäki, E. and Saurola, P. (1991). *Ornis Fennica* 68: 158–169. (A decline in the size of the populations, and an increase in clutch and brood size, seems to be due to the loss of good foraging habitats resulting from the large-scale abandoning of dairy farming.)

**Egg-laying patterns in captive Starlings.** Meijer, T. (1992). *Ardea* 80: 301–310. (A study of 14 males and 28 females in a large aviary.)

### AUSTRALIAN SPECIES

**Identifying white egrets.** Newman, K. and Holtshausen, G. (1990). *Birding in Southern Africa* 42(4): 111–113. (Distinguishing features of Great Egret, Intermediate Egret, Little Egret, and Cattle Egret. Has both text and colour plates.)

**Feeding ecology of charadriiform chicks in agricultural grassland.** Beintema, A. J., Thissen, J. B., Tensen, D. and Visser, G. H. (1990). *Ardea* 79: 31–44. (Diets of chicks of the Lapwing, Black-tailed Godwit, Redshank, Ruff, and Oystercatcher were studied by faecal analysis in The Netherlands.)

**The effectiveness of nest defence by Black-tailed Godwits *Limosa limosa*.** Green, R. E., Hirons, G. J. M. and Kirby, J. S. (1990). *Ardea* 78: 405–413. (This paper describes measurements of the frequency of aerial attacks on avian predators by nesting Black-tailed Godwits and the effectiveness of these attacks compared with those by Lapwings.)

**A continental rendezvous of the Red-necked Phalarope *Phalaropus lobatus* in Iran.** Mikkola, K., Haapanen, E. and Hosseini, F. (1990). *Ornis Fennica* 67: 141–142. (About 100 000 phalaropes on an inland salt lake in April 1990.)

**Conspecific nest parasitism in the European Starling.** Pinxten, R., Eens, M. and Verheyen, R. F. (1991). *Ardea* 79: 15–30. (Altogether 15% of 174 first clutches and 2% of 86 intermediate clutches were parasitised.)

**Some implications of resource removal in the control of mynas (*Acridotheres* spp.) in Singapore.** Nee, K., Sigurdsson, J. B., Hails, C. J. and Counsilman, J. J. (1990). *Malay. Nat. Jour.* 44: 103–108. (Various methods using a combination of bioacoustics, killing and alteration to roost sites, were tried to disperse the roosts or reduce population numbers of Common Mynas and White-vented Mynas. These proved to be only temporary solutions.)

**Alien birds in Southern Africa: the crow must go.** Berruti, A. and Nichols, G. (1991). *Birding in Southern Africa* 43: 52–57. (House Crows *Corvus splendens* were first seen in Durban in 1972. By the beginning of 1989 the population was estimated to be 1 000 birds. This paper discusses why it was decided to try and eradicate the bird from Durban and the methods used. At the time of writing, the population had been reduced to about 200 to 300 birds.)

Predation of butterflies by birds. Braby, M. F. (1994.) *Victorian Naturalist* 111: 109–111. (Gives a review of this subject for Australian birds.)

A glossary for avian conservation biology. Koford, R. R., Dunning, J. B., Ribic, C. A. and Finch, D. M. (1994). *Wilson Bulletin* 106: 121–137. (Provides standard definitions for many of the terms used in avian biology. Compiled by the authors to assist communication among researchers and managers.)

Nesting success of cavity-nesting birds using natural tree cavities. Johnson, L. S. (1994). *Journal of Field Ornithology* 65: 36–51.

Host-ectoparasite interactions in the Bell Miner *Manorina melanophrys* (Meliphagidae) and other sympatric passerines. Poiani, A. (1994). *Victorian Naturalist* 111: 102–109.

Use of heathland and adjoining forest by honeyeaters: results of a radiotracking study. Pyke, G. H. and O'Connor, P. J. (1993). *Australian Journal of Ecology* 18: 269–274.

Home range of Plumed Frogmouths *Podargus ocellatus plumiferus* during the non-breeding season as shown by radio-tracking. Smith, G. C., Hamley, B. J., Park, K. M. and Kehl, J. (1994). *Emu* 94: 134–137.

Ectoparasitism as a possible cost of social life: a comparative analysis using Australian passerines (Passeriformes). Poiani, A. (1992). *Oecologia* 92: 429–441.

Red light disrupts magnetic orientation of migratory birds. Wiltschko, W., Munro, U., Ford, H. and Wiltschko, R. (1993). *Nature* 364: 525–527. (Reports the first orientation tests on migratory birds under light of different wavelengths. The test birds were Silvereyes.)

Magnetic compass orientation in the yellow-faced honeyeater, *Lichenostomus chrysops*, a day migrating bird from Australia. Munro, U. and Wiltschko, W. (1993). *Behavioral Ecology and Sociobiology* 32: 141–145.

Migratory fattening in an Australian intracontinental migrant. Chan, K. (1994). *Condor* 96: 211–214. (Migratory fattening occurs in the Silvereye prior to migrating across Bass Strait.)

High annual variability in reproductive success and survival of an Antarctic seabird, the snow petrel *Pagodroma nivea*: a 27-year study. Chastel, O., Weimerskirch, H. and Jouventin, P. (1993). *Oecologia* 94: 278–285.

The influence of egg-size, mass and composition upon hatching success in the short-tailed shearwater *Puffinus tenuirostris* (Aves: Procellariiformes). Meathrel, C. E., Skira, I. J., Bradley, J. S. and Wooller, R. D. (1993). *Journal of Zoology* 230: 679–686.

The effect of parental condition on egg-size and reproductive success in short-tailed shearwaters *Puffinus tenuirostris*. Meathrel, C. E., Bradley, J. S., Wooller, R. D. and Skira, I. J. (1993). *Oecologia* 93: 162–164. (Examines the intrinsic effects of egg-size from any effects stemming from differential quality of parental care.)

Incidental capture of seabirds by Japanese southern bluefin tuna longline vessels in New Zealand waters, 1988–1992. Murray, T. E., Bartle, J. A., Kalish, S. R. and Taylor, P. R. (1993). *Bird Conservation International* 3: 181–210. (Twelve seabird taxa were recorded as incidental catch during 785 days on vessels. The estimated minimum number of seabirds caught in New Zealand waters varied from 3 652 in 1988 to 360 in 1992, probably as a result of mitigation measures introduced by the fishing industry.)

Carcasses of Adelie Penguins as a food source for South Polar Skuas: some preliminary observations. Norman, F. I., McFarlane, R. A. and Ward, S. J. (1994). *Wilson Bulletin* 106: 26–34. (Because seabird eggs and chicks provide as much energy as alternative foods such as krill and fish which require extended foraging, it is adaptive for skuas nesting near penguin colonies to forage there.)

Helpers liberate female fairy-wrens from constraints on extra-pair mate choice. Mulder, R. A., Dunn, P. O., Cockburn, A., Lazenby-Cohen, K. A. and Howell, M. J. (1994). *Proc. R. Soc. Lond. B* 255: 223–229. (The Superb Fairy-Wren is shown to have the highest known rate of extra pair fertilization, and that extra-pair paternity is highest in pairs assisted by male helpers, although the helpers themselves are not responsible for the cuckoldry.)

Sperm competition and the reproductive anatomy of male Superb Fairy-wrens. Mulder, R. A. and Cockburn, A. (1993). *Auk* 110: 588–593. (The cloacal protuberance and large testes of Superb Fairy-Wrens provide large sperm reserves primarily for extra-pair copulations.)

Unstable social structure associated with a population crash in the Tasmanian native hen, *Tribonyx mortierii*. Goldizen, A. W., Goldizen, A. R. and Devlin, T. (1993). *Animal Behaviour* 46: 1013–1016. (The social structure of a native hen population changed dramatically during a catastrophic decline in population size.)

Spatial organization of the co-operatively breeding Bell Miner *Manorina melanophrys*. Clarke, M. F. and Fitz-Gerald, G. F. (1994). *Emu* 94: 96–105.

Behaviour and ecology of the Noisy Miner *Manorina melanocephala*. Buchan, J. C. (1992). *B.App. Sci. (Biol.) Hons Thesis: Univ. of Central Queensland*.

Spring and fall migration of Peregrine Falcons from Padre Island, Texas. Chavez-Ramirez, F., Vose, G. P. and Tennant, A. (1994). *Wilson Bulletin* 106: 145–148. (Reports the pathway and migratory behaviour of two migrating falcons tracked with radiotelemetry.)

Breeding biology of the Leadend Flycatcher *Myiagra rubecula*. Tremont, S. (1994). *Hons thesis: Dept of Zoology, Univ. of New England*.

Evidence for individual female host specificity in two Australian bronze-cuckoos (*Chrysococcyx* spp.) Brooker, M. and Brooker, L. (1992). *Australian Journal of Zoology* 40: 485–493. (Discusses three scenarios for the mechanisms of host selection.)

## TECHNIQUES AND ANALYSES

**The role of large-scale data collection projects in the study of southern African birds.** Underhill, L. G., Oatley, T. B. and Harrison, J. A. (1991). *Ostrich* 62: 124–148. (The major data collections (checklists, migration enquiry, atlas projects, censuses, bird banding and recoveries, biometric data, nest record cards, moult cards and beached bird surveys) are described. Details are given of the data sets held by each project and the potential for their further analyses is considered. Recommendations are made about the future of the projects, including incorporating most of them into an Avian Demography Unit.)

**Ageing and sexing Gray Catbirds by external characteristics.** Suthers, H. B. and Suthers, D. D. (1990). *N. Amer. Bird Bander* 15: 45–52. (By measuring the length of some characteristics (e.g. wing) and establishing a score for the colour of others (e.g. tongue) it proved possible to age birds with an 88.5% accuracy and to sex birds with a 78% accuracy. It may be possible to use a similar technique with some Australian species.)

**Estimation of annual adult survival rates of Barnacle Geese *Branta leucopsis* using multiple resightings of marked birds.** Ebbinge, B. S., van Biezen, J. B. and van der Voet, H. (1990). *Ardea* 78: 73–112. (Three methods were examined: resightings of birds with individually numbered PVC leg bands (which proved to be the most successful); recovery of banded birds found dead; and population counts and birth rate estimates.)

**Building a portable bird banding organizer.** Underwood, C. R. and Hansrote, C. J. (1990). *N. Amer. Bird Bander* 15: 89. (A case for carrying bands and other equipment.)

**The value of atlassing: distribution and relative abundance.** Harrison, J. (1990). *Birding in Southern Africa* 42: 109–110, 115–116. (the use of data to show distribution and abundance.)

**The value of atlassing: the seasonality of migratory birds.** Harrison, J. (1991). *Birding in Southern Africa* 43: 4–6. (The use of data from different months to demonstrate changes in distribution and abundance.)

**Feathers from museum bird skins — a good source of DNA for phylogenetic studies.** Leeton, P. and Christidis, L. (1993). *Condor* 95: 465–466. (Describes a protocol for extracting DNA from single feather tips of museum bird skins.)

**Relative masses of primary feathers in waders.** Underhill, L. G. and Summers, R. W. (1993). *Wader Study Group Bulletin* 71: 29–31. (Suggests a standard procedure for determining the relative masses of primary feathers and for computing the Percentage Feather Mass Grown (PFMG) from moult scores.)

**Techniques for capturing birds inside natural cavities.** Stanback, M. T. and Koenig, W. D. (1994). *Journal of Field Ornithology* 65: 70–75.

**The effect of neck collars on the behaviour, weight and breeding success of Mute Swans *Cygnus olor*.** Spray, C. J. and Bayes, K. (1992). *Wildfowl* 43: 49–57. (Neck collars caused a significant difference in the type of feeding method employed by marked Mute Swans, although feeding frequency was not affected.)

**Evaluation of dyes and techniques to color-mark incubating Herring Gulls.** Belant, J. L. and Seamans, T. W. (1994). *Journal of Field Ornithology* 64: 440–451. (Evaluates techniques for colour marking gulls by applying dyes to their eggs. Hatch success of gull clutches was significantly reduced by direct application of dye to gull eggs.)

**Red colour bands do not improve the mating success of male rock ptarmigan.** Holder, K. and Montgomerie, R. (1993). *Ornis Scandinavica* 24: 53–58. (Studies the relation between the mating success of males and the colour of their leg bands. A previous study on this species reported that males with red or orange leg bands achieved higher mating success than males without these colours.)

**Effects of radio transmitters on nesting captive mallards.** Houston, R. A. and Greenwood, R. J. (1993). *Journal of Wildlife Management* 57: 703–709. (Radio transmitters attached to mallards by sutures and glue were not retained reliably, whereas harness transmitters were retained for the duration of the 106 day study.)

**Nesting effort by wild mallards with 3 types of radio transmitters.** Rotella, J. J., Howerter, D. W., Sankowski, T. P. and Devries, J. H. (1993). *Journal of Wildlife Management* 57: 690–695. (Compares various measures of nesting effort for mallards radiomarked with harnessed backpacks, sutured backpacks and abdominal implants.)

**Supplementary address bands increase recovery rates.** Hussell, D. J. T., Shepherd, D., Wallace, G. E. and McCracken, D. I. (1993). *N. Amer. Bird Bander* 18: 133–141. (A second band bearing a return address was placed on the other leg of small birds marked with numbered bands that did not have an address on the outside. This resulted in an increase in the number of recoveries.)

**Verifying the accuracy of band recovery information.** Houston, C. S. and Francis, C. M. (1993). *N. Amer. Bird Bander* 18: 51–56. (Band finders were contacted in order to verify the accuracy of the computerised reports from the banding office. This paper provides details of the additional information obtained.)

**Weight loss by birds when held for banding.** Refsnider, J. M. (1993). *N. Amer. Bird Bander* 18: 90–97. (Birds were held in cloth bags for 2 hrs and weighed every 30 mins. The birds lost weight over the entire time, but most was lost during the first 30 mins. The species tested appeared to suffer no ill effects from being held for 2 hrs.)

**An improved method of net handling and storage.** Blackshaw, S. R. (1993). *N. Amer. Bird Bander* 18: 49–50. (The use of plastic supermarket bags for storing mist nets.)

**A mist net design for capturing Marbled Murrelets.** Paton, P. W. C., Ralph, C. J. and Seay, J. (1991). *N. Amer. Bird Bander* 16: 123–126. (A method of elevating a mist net 45 m into the forest canopy.)

**A modified floating-fish snare for capture of Inland Bald Eagles.** Jackman, R. E., Hunt, W. G., Driscoll, D. E. and Jenkins, J. M. (1993). *N. Amer. Bird Bander* 18: 98–101. (Nooses were attached to the body of a floating dead fish which was anchored to the bottom of the body of water by a length of cord.)

**Using two survey methods to determine a suburban bird population.** Hansrote, C. and Hansrote, M. (1991). *N. Amer. Bird Bander* 16: 114–118. (A comparison of the use of mist nets and banding with a visual census.)

**Using wing molt to age passerines.** Mulvihill, R. S. (1993). *N. Amer. Bird Bander* 16: 1–10. (A detailed description of the use of wing molt differences to distinguish between passerines older than one year and those less than one year.)