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.

Journals perused: *Auk* **112** (4), *Australian Bird Watcher* **15** (7, 8), **16** (1), *Australian Journal of Ecology* **20** (1, 2, 3), *Australian Journal of Zoology* **43** (5); *Canberra Bird Notes Condor* **97** (1, 2); *Ecological Abstracts* **1994** (12), **1995** (1, 2, 3, 4, 5, 6, 7, 9), **1996** (4, 5, 6, 7); *Ecological Monographs* **65** (2, 3), **66** (30); *Emu* **95** (2, 3, 4), **96** (3); *Journal of Wildlife Management* **59** (2, 3, 4); *North American Bird Bander* **19** (2); *Stilt* **28**; *South Australian Ornithologist* **32** (4 and 5); *Wildlife Research* **23** (3, 4, 5); *Wildlife Review* **246**; *Wilson Bulletin* **107** (2, 3), **108** (2).

TECHNIQUES AND ANALYSES

Female-specific restriction fragments revealed by DNA fingerprinting and implications for extra-pair fertilizations in the Short-tailed Shearwater (*Puffinus tenuirostris* : Procellariformes: Procellariidae). Austin, J. J. and Parkin, D. T. (1995) *Australian Journal of Zoology* **43**: 443–447. (Describes a genetic method of assigning sex.)

Neck band loss rates for Lesser Snow Geese. Johnson, S. R., Schieck, J. O. and Searing, G. F. (1995) *Journal of Wildlife Management* **59**: 747–752. (Neck band loss was substantial, higher for males than females.)

How to erect nets easier and faster. de Beer, S. (1995) *Safring* **24**: 23–26. (Describes a system for erecting mistnets in less than 3 minutes.)

Factors affecting visibility rate of waterfowl surveys in the Mississippi Alluvial Valley. Smith, D. R., Reinecke, K. J., Conroy, M. J., Brown, M. W. and Nassar, J. R. (1995) *Journal of Wildlife Management* **59**: 515–527. (Visibility rate in aerial surveys of waterfowl was influenced by habitat, transect width and waterfowl group size.)

An artificial nest box for burrow-nesting seabirds. Priddel, D. and Carlile, N. 1995 *Emu* **95**: 290–294.

An improved method for collecting bird ectoparasites. Bear, A. (1995). *Journal of Field Ornithology* **66**: 212–214.

Bird-borne satellite transmitters: current limitations and future prospects. Benvenuti, S. (1993). *Avocetta* **17**: 35-39. (Brief review and some data on Brent Geese.)

Eastern Curlews carry the load! Driscoll, P. (1995). *Queensland Wader* **15**: 3. (PTT's. Reports on trialling and developing techniques for fitting PTT's (satellite transmitters) to Eastern Curlew.)

Measurement error in aerial surveys of osprey productivity. Ewins, P. J. and Miller, M. J. R. (1995). *Journal of Wildlife Management* **59**: 333–338. (Fixed wing surveys for *Pandion haliaetus* underestimated total chick numbers, but rotor-wing survey counts by both observers did not differ from actual nest contents.)

Supplementary address bands increase recovery rates. Hussell, D. J. T., Shepherd, D., Wallace, G. E. and McCracken, J. D. (1993). *North American Bird Bander* **18**: 133–141. (Wording of addresses on bands has a significant effect on recovery reports. Fitting both a numbered band and a supplementary band with an address had a significant positive influence on report of recoveries.)

A review of software packages for estimating animal home ranges. Larkin, R. P. and Halkin, D. (1994). *Wildl. Soc. Bull.* **22**: 274–287.

Quantitative comparison of two methods of assessing diet of nestling Skylarks *Alauda arvensis*. Poulsen, J. G. and Aebischer, N. J. (1995). *Auk* **112**: 1070–1073. (Indirect non-invasive method of feacal analysis produces the same assessment of nestling diet composition as the direct but invasive neck-collar method.)

Use of fluorescent powder for tracking American Woodcock broods. Steketee, A. K. and Robinson, W. L. (1995). *Auk* **112**: 1043–1045. (Fluorescent powder was used on chicks too small to carry radio transmitters and provided accurate information on distance moved, habitat used and other biological parameters. Monitoring broods over several weeks requires powder re-application.)

Effects of olfactory cues on artificial-nest experiments. Whelan, C. J., Dilger, M. L., Robson, D., Hallyn, N. and Dilger, S. (1994). *Auk* **111**: 945–952. (Examines the effects of two potential olfactory cues on the outcome of experiments using artificial nests to assy predation. Olfactory-searching predators can cue on human odours left near artificial nests, but rain or scents can decrease this bias.)

SEABIRDS

Genetic evidence for extra-pair fertilizations in socially monogamous Short-tailed Shearwaters, *Puffinus tenuirostris* (Procellariiformes: Procellariidae), using DNA fingerprinting. Austin, J. J., Carter, R. E. and Parkin, D. T. (1993) *Australian Journal of Zoology* **41**: 1–11.

Use of morphometric parameters for the determination of sex of Adelie Penguins. Kerry, K., Agnew, D. J., Clarke, J. R. and Else, G. D. (1992) *Wildlife Research* **19**: 657–664.

Satellite tracking of the Wandering Albatross *Diomedia exulans* around Australia and in the Indian Ocean. Nicholls, D., Murray, D., Battam, H., Robertson, G., Moors, P., Butcher, E. and Heldebrandt, M. (1995) *Emu* **95**: 223–230.

Satellite tracking of Light-mantled Sooty Albatrosses. Weimerskirch, H. and Robertson, G. (1994) *Polar Biology* **14**: 123–126. (Five breeding *Phoebetria palpebrata* at Macquarie Island were tracked during foraging trips during the incubation period.)

Use of a population model to assess the impact of longline fishing on Wandering Albatross *Diomedea exulans* populations. Moloney, C. L., Cooper, J., Ryan, P. G. and Siegfried, W. R. (1994) *Biological Conservation* **70**: 195–203. (An age-structured model developed using Crozet Islands demographic parameters indicates a population decreasing at a rate of 2.29% per year, which concurs with global trends.)

Mortality of adult Gould's Petrels *Pterodroma leucoptera leucoptera* at the nesting site on Cabbage Tree Island, New South Wales. Priddel, D. and Carlile, N. (1995) *Emu* **95**: 259–264.

Three decades of burrow estimates for Wedge-tailed Shearwaters on the Capricorn Group. Dyer, P. K., Hill, G. J. E. and Barnes, A. (1995) *Emu* **95**: 272–279.

Distribution of seabirds at sea in the Gulf of Carpentaria, Australia. Blaber, S. J. M. and Milton, D. A. (1994) *Australian Journal of Marine and Freshwater Research* **45**: 445–454. (Distribution is discussed in relation to proximity to breeding and roosting sites, food availability, effects of discards from prawn trawling, and water currents.)

The role of parents in sibilicidal brood reduction of two booby species. Anderson, D. J. (1995). *Auk* **112**: 860–869. (Inter-specific differences in nest shape appear to contribute to early siblicide in Masked Boobies, but suppress early siblicide in Blue-footed Boobies.)

Breeding cycle of Wedge-tailed Shearwaters *Puffinus pacificus* at Heron Island, Great Barrier Reef. Carter, J. L., Hill, G. J. E. and Dyer, P. K. (1996). *Emu* **96**: 195–198.

The influence of age on reproductive success in the Australasian gannet *Morus serrator*. Gibbs, H. (1995). BSc.Honours thesis, Melbourne University.

The effect of investigators on the breeding success of royal, *Eudyptes schlegeli*, and rockhopper penguins, *E. chrysocome*, at Macquarie Island. Hull, C. L. and Wilson, J. (1996). *Polar Biology* **16**: 335–337. (No significant differences between breeding success at control and experimental sites for both species.)

Post-release survival of oiled, cleaned seabirds in North America. Sharp, B. E. (1996). *Ibis* **138**: 222–228. (Long-term recovery rates were 10–20% of those of non-oiled birds. Survival was not greater for oiled birds treated in recent years with modern methods. Effectiveness of rehabilitation for oiled seabirds should be re-examined in light of these results.)

SOCIAL BEHAVIOUR

Extra-pair relations in Zebra Finches: differential male success results from female tactics. Burley, N. T., Enstrom, D. A. and Chitwood, L. (1994) *Animal Behaviour* **48**: 1031–1041.

Parentage analysis of multi-male social groups of Tasmanian Nativehens *(Tribonyx mortierii)*: genetic evidence for monogamy and polyandry. Gibbs, H. L., Goldizen, A. W., Bullough, C. and Goldizen, A. R. (1994) *Behav. Ecol. Sociobiol.* **35**: 363–371.

Examination of the social system of the Dusky Moorhen: a comparison of populations from different climatic regions and a determination of whether the system can be described as "egalitarian". MacKenzie, K. (1994) *B.Sc. Hons thesis*, Univ. of Queensland: Brisbane.

Parental choice selects for ornamental plumage in American Coot chicks. Lyon, B. E., Eadie, J. M. and Hamilton, L. D. (1994) *Nature* **371**: 240–243. (*Fulica americana*, parent coots feed ornamented chicks preferentially over non-ornamented chicks.)

Variation in initiator strategy in fighting by Silvereyes. Wilson, J. M. (1994) *Animal Behaviour* **47**: 153–162.

The significance of back colour in relation to territorial defence in the Australian Magpie *Gymnorhina tibicen*. Kallioinen, R. 1993 *Honours thesis*. Faculty of Environmental Sciences, Griffith University. 46 pp.

Retardation of breeding onset in great tits *Parus major* by blood parasites. Allander, K. and Bennett, G. F. (1995). *Functional Ecology* **9**: 677–682. (Found significant negative relationship between blood parasites and timing of breeding in females but not males. As laying and hatching date affect juvenile survival, and because parasites affect these dates, parasites may reduce individual fitness.)

Observations on parental and fledging behaviour of Buff-breasted Paradise-Kingfishers *Tanysiptera sylvia*. Andrews, M. and Brickhill, T. (1995). *Australian Bird Watcher* **16**: 115–119.

Site fidelity of Buff-breasted Paradise Kingfisher. Andrews, M., Brickhill, T., Crouther, M. and Crouther, K. (1995). *The Bird Observer* **December 1995**: 9.

Divorce in birds: a review of the hypotheses. Choudhury, S. (1995). *Animal Behaviour* **50**: 413–429.

Territorial defence is the major function of female song in the superb fairy-wren *Malurus cyaneus*. Cooney, R. and Cockburn, A. (1995). *Animal Behaviour* **49**: 1635–1647. (Investigates 4 hypotheses for function of female song: 1. to defend territories, 2. to maintain contact with mates, 3. to assess the amount of time mates are spending on the territory, 4. to solicit displays from extra-group males.)

Food supplementation induces provisioning of young in co-operatively breeding White-winged Choughs. Cullen, N. J., Heinsohn, R. and Cockburn, A. (1996). *Journal of Avian Biology* **27**: 92–94. (Supply of large amounts of food in winter switched on provisioning of young by both helpers and adults. Helping behaviour is therefore influenced by the costs of supplying food.)

Increased opportunities for cuckoldry may be why dominant male fairy-wrens tolerate helpers. Green, D. J., Cockburn, A., Hall, M. L., Osmond, H. and Dunn, P. O. (1995). *Proc. R. Soc. Lond. B* **262**: 297–303. (Superb Fairy-wren dominant males with helpers provide less parental care during the nestling period and use this reduced workload to make extra-territorial forays which are used to court extra-group females and thus obtain extra-group copulations.)

Brood reduction facilitates female but not offspring survival in the great tit. Horak, P. (1995). *Oecologia* **102**: 515–519. (Female great tits might be able to reallocate resources for self-maintenance if food appears to be short for the successful raising of the brood. However, parents are not capable of efficiently reallocating resources between nestlings.)

Reproduction without parenthood: male tactics and female choice in a promiscuous bird. Jones, D. N. (1994). *Physiology and Ecology Japan* **29**: 135–146. (Male Australian brush-turkeys increase the probability of receiving visits from laying females by maintaining more than one mound.)

The evolution of plumage brightness in birds is related to extrapair paternity. Moller, A. P. and Birkhead, T. R. (1994). *Evolution* **48**: 1089–1100. (Brightness of male plumage and sexual dimorphism in brightness were positively associated with high levels of extrapair paternity. This association was much stronger than male brightness and the degree of polygyny.)

Extra-pair paternity, sperm competition and the evolution of testis size in birds. Moller, A. P. and Briskie, J. V. (1995). *Behavioral Ecology and Sociobiology* **36**: 357–365. (Testis mass is related positively to the level of extra-pair paternity. Females may largely control allocation of paternity and increased sperm production in males may simply be a male strategy to make the best of a bad situation.)

Natal and breeding dispersal in a co-operative, extra-group-mating bird. Mulder, R. A. (1995). *Journal of Avian Biology* **26**: 234–240. (Dispersal by yearling male Superb fairy-wren prompted mainly by vacancies in nearby territories, and most males acquired a social mate without leaving their natal territory. All females dispersed in their first year.)

Parental role-reversed polyandry and paternity. Valle, C. A. (1994). *Auk* **111**: 476–478. (Polyandry may evolve if mated male is likely to sire at least part of a deserting female's subsequent brood.)

Single-locus DNA fingerprinting reveals that male reproductive success increases with age through extra-pair paternity in the house sparrow *Passer domesticus*. Wetton, J. H., Burke, T., Parkin, D. T. and Cairns, E. (1995). *Proc. R. Soc. Lond. B* **260**: 91–98. (Males at least 2 years old sired more young through EPC's, resulting in an average reproductive output 36% higher than that of yearlings.)

GENERAL INTEREST

Directions in conservation biology. Caughley, G. (1994). *Journal of Animal Ecology* **63**: 215–244. (Endangered species conservation. The small population model treats an effect (smallness) as a cause. The declining population model is relevant to most conservation problems, encouraging investigation of the cause of decline.)

The Noisy Miner *Manorina melanocephala* and rural dieback in remnant Eucalypt woodlands. Clarke, M. F., Grey, M. J., Britton, D. R. and Loyn, R. H. (1995). *RAOU Report No.* **98**: RAOU, Melbourne. (Demonstrates that Noisy Miners affect avian diversity and abundance by aggressive exclusion of small birds.)

Ecological and life-history correlates of co-operative breeding in South African birds. Du Plessis, M. A., Siegfried, W. R. and Armstrong, A. J. (1995). *Oecologia* **102**: 180–188. (Identifies differences between Australian and South African birds.)

The current and potential distribution of the Common Myna *Acridotheres tristis* in Australia. Martin, W. K. (1996). *Emu* **96**: 166–173. (Supports hypothesis that range expansion is limited above latitude 40°S due to unsuitable climate. Colder regions of SE Australia also predicted to be unsuitable.)

The mystery of shorebird over-summering: a new hypothesis. McNeil, R., Diaz, M. T. and Villeneuve, A. (1994). *Ardea* **82**: 143–151. (Most over-summering birds are sexually immature first year birds. Possibility of a relationship between trematode infestation and over-summering is suggested.)

Abundance, zonation and foraging ecology of birds in mangroves of Darwin Harbour, Northern Territory. Noske, R. (1996). *Wildlife Research* **23**: 443–474.

Bird assemblages in a small public reserve and adjacent residential area at Wollongong, New South Wales. Wood, K. A. (1996). *Wildlife Research* **23**: 605–620.

AUSTRALIAN SPECIES

Loss of function in territorial song: comparison of island and mainland populations of the Singing Honeyeater *Meliphaga virescens*. Baker, M. C. (1994). *Auk* **111**: 178–184. (Song playbacks showed reduced response of island birds to mainland songs, but mainland birds maintained strong response to other mainland dialects despite greater geographic separation of mainland populations.)

Population density, body mass and niche overlap in Australian birds. Cotgreave, P. (1995). *Functional Ecology* **9**: 285–289.

Courts and seasonal activities at them by male tooth-billed bowerbirds *Scenopoeetes dentirostris* (Ptilorhynchidae). Frith, C. B. and Frith, D. W. (1994). *Memoirs of the Queensland Museum* **37**: 121–145.

Hybridization between the Great and Spotted Bowerbird *Chlamydera nuchalis* and *C. maculata*: an authenticated hybrid bowerbird (Ptilonorhynchidae). Frith, C. B. and Frith, D. W. (1995). *Memoirs of the Queensland Museum* **38**: 471–476.

Home range and extra-court activity in the male tooth-billed bowerbird *Scenopoeetes dentirostris* (Ptilorhynchidae). Frith, C. B., Frith, D. W. and Moore, G. J. (1994). *Memoirs of the Queensland Museum* **37**: 147–154. (Mean home range of four males was 9.5 ha, with mean overlap of 50%.)

Molecular phylogenetic affinities of the Night Parrot *(Geopsittacus occidentalis)* and the Ground Parrot *(Pezoporus wallicus)*. Leeton, P. R. J., Christidis, L., Westerman, M. and Boles, W. E. (1994). *Auk* **111**: 833–843. (A close association was found between Geopsittacus and Pezoporus. These two genera were also found to be closely linked with Neophema and Melopsittacus. Geopsittacus and Strigops (Kakapo) were found not to be closely related.)