

DISCUSSION

The male and female behaved similarly in the number of feeding trips made and the type of prey brought to the young. The capture of prey by these kingfishers is probably largely opportunistic; Hobbs (1976) reported that *H. pyrrhopygia* fed extensively on rodents during a mouse plague at Ivanhoe, New South Wales. The role of ants in keeping the nest clean could be extremely important as insect larvae could otherwise breed in the nest and parasitize the young. Fry (1980) reported that dipterous and coleopterous larvae typically inhabit the debris left inside kingfisher nests. It is evident from the mode of nest construction and from fledgling and parental behaviour that predation has been a major influence on the observed behaviour patterns.

ACKNOWLEDGEMENTS

thank the University of New South Wales for use of the facilities at the Fowlers Gap Arid

Zone Research Station, and the Officer-in-Charge, Dr Charles Carter, for providing weather data and other assistance. The Australian Museum permitted access to collections for morphological measurements. The work was partly supported by a grant from the National Geographic Society to Dr John A. Wiens. Range Bayer, Richard Bradley, and John Wiens provided critical comments on the manuscript.

REFERENCES

- Courtney, J. (1971). Breeding of the Red-rumped Kingfisher at Swan Vale, NSW. *Emu* 71:174-175.
 Fry, C. H. (1980). The Evolutionary Biology of Kingfishers (*Alcedinidae*). *The Living Bird* 18:113-160.
 Hobbs, J. N. (1976). Birds feeding on house mice. *Emu* 76:219-220.
 Lord, E. A. R. (1935). Notes on the Red-backed Kingfisher. *Emu* 35:59-62.

RECOVERY ROUND-UP

This section is prepared with the co-operation of the Secretary, Australian Bird and Bat Banding Schemes, Australian National Parks and Wildlife Service. The recoveries are only a selection of the thousands received each year; they are not a complete list and should not be analysed in full or in part without the prior consent of the banders concerned. Longevity and distance records refer to the ABBBS unless otherwise stated. The distance is the shortest distance in kilometres along the direct line joining the place of banding and recovery; the compass direction refers to the same direct line. (There is no implication regarding the distance flown or the route followed by the bird.)

Recovery or longevity items may be submitted directly to me whereupon their merits for inclusion will be considered.

—Hon. Editor.

The following abbreviations appear in this issue:

ANARE — Australian National Antarctic Research Expeditions.

ANPWS — Australian National Parks and Wildlife Service.

AWSG — Australasian Wader Studies Group.

NPWS, SA — South Australian National Parks and Wildlife Service.

PSG — Penguin Study Group.

SSG (BOAT) — Shorebird Study Group of the Bird Observers Association of Tasmania.

VWSG — Victorian Wader Study Group.

WAWSG — Western Australian Wader Study Group.

Little Penguin *Eudyptula minor*

190-26143. Nestling banded by PSG on Phillip Island, Vic. on 29 Jan. 86. Found dead at Knights Beach, Port Elliot, SA on 13 Apr. 86. 662 km NW.

Black-browed Albatross *Diomedea melanophrys*

CF7949*. Banded on Kerguelen Island, Antarctica (49°20'S., 70°15'E.) on 13 Feb. 71. "Found as skeleton" at Elliston, SA (33°37'S., 134°54'E.) in Aug. 85, over 14 years 5 months after banding. 5 492 km NE.
 *CRBPO (French Banding Scheme) band.

Shy Albatross *Diomedea cauta*

280-07620. Nestling banded by N. P. Brothers at Mewstone, Tas., (43°44'S., 146°22'E.) on 24 Apr. 85. "Entangled in fishing gear" (dead) off West Coast of South Africa (31°00'S., 15°36'E.) on 8 Oct. 86. 10 338 km SW.

Southern Giant-petrel *Macromectes giganteus*

- (a) 130-50628. Banded by A. F. C. Lashmar at Eastern Cove, Kangaroo Island, SA on 24 June 86. Found exhausted (later died) at Pottsville Beach, NSW on 2 Aug. 86. 1 692 km ENE.
 (b) 131-52111. Nestling banded by ANARE on Frazier Islands, near Casey Antarctica (66°14'S., 110°11'E.) on 14 Feb. 86. "Entangled in fishing gear" (later died) at Western Cook Strait, New Zealand (41°05'S., 174°28'E.) on 1 Oct. 86. 4 775 km ENE.

(c) V03556*. Banded on Elephant Island, South Shetland Islands, South Atlantic (61°20'S., 55°20'W.) on 24 Jan. 86. Found dead on Rottneest Island, WA (32°0'S., 115°31'E.) by D. A. Saunders on 8 July 86. 9 626 km S.

*Brazilian Banding Centre band.

Northern Giant-petrel *Macronectes halli*

(a) 131-41499. Nestling banded by ANARE at Douglas Bay, Macquarie Island (54°32'S., 158°53'E.) on 18 Jan. 85. Recovered near Atlantida Beach, Uruguay (34°50'S., 55°45'W.) on 20 Apr. 86. 9 563 km SE.

(b) 131-47323. Nestling banded by ANARE on West Coast of Macquarie Island (54°37'S., 158°51'E.) on 25 Jan. 86. Recovered sick (later died) near Sodwana Bay, South Africa (27°27'S., 32°42'E.) on 27 Aug. 86. 9 564 km SW.

Australian Pelican *Pelecanus conspicillatus*

(a) 170-02332. Banded by J. A. K. Lane at Pelican Point, Swan River, WA on 19 Dec. 77. Found dead on banks of Swan River at East Fremantle, WA on 21 Sept. 86. over 8 years 9 months after banding. 7 km SW.

(b) 170-02644. Banded by J. A. K. Lane at Millers Point (Pallinup River), WA on 27 Nov. 78. Found dead at Crawley, Perth, WA on 10 Aug. 86, over 7 years 8 months after banding. 398 km NW.

(c) 170-04522. Nestling banded by M. H. Waterman on North Pelican Island, The Coorong, SA on 16 Dec. 84. Found dead at River Flat, Hunter River, Glenbawn Dam, NSW on 18 Aug. 86. 1 141 km NNE.

(d) 170-05266. Nestling banded by M. H. Waterman on North Pelican Island, The Coorong, SA on 27 Dec. 84. "Electrocuted" at Fulham, Qld. on 16 June 86. 1 571 km NE.

Australasian Gannet *Morus serrator*

M39657* Juvenile banded on White Island, New Zealand (37°31'S., 177°12'E.) on 31 Jan. 86. Found "exhausted" on Bare Island, Botany Bay, NSW (34°0'S., 151°14'E.) on 26 July 86. 2 373 km W.

*New Zealand Banding Scheme band.

Masked Booby *Sula dactylatra*

(a) 131-50897. Banded by O. R. Evans on Nepean Island, near Norfolk Island (29°04'S., 167°57'E.) on 17 Aug. 85. Trapped near Efate, Vanuatu (17°44'S., 168°19'E.) on 5 Mar. 86. 1 256 km N.

(b) 131-54877. Nestling banded by ANPWS on Chilcott Islet, Coral Sea (16°56'S., 150°00'E.) on 19 Sept. 85. Recaptured (released alive) at sea off Lihir Island, Papua New Guinea (3°00'S., 153°00'E.) on 6 Aug. 86. 1 576 km N.

Brown Booby *Sula leucogaster*

(a) A2152. Nestling banded by B. R. King on Raine Island, Qld (11°36'S., 144°01'E.) on 15 Dec. 85. "Entangled in fishing gear" at Basima Ferguson Island, Milne Bay Province, Papua New Guinea (9°30'S., 150°40'E.) on 18 June 86. 764 km ENE.

(b) 121-16670. Nestling banded by B. R. King at Pandora Cay, Qld (11°26'S., 144°00'E.) on 14 Dec. 85. Found dead at Airara Village, Northern Province, Papua New Guinea (9°30'S., 149°18'E.) on 3 June 86. 618 km ENE.

(c) 121-25230. Nestling banded by C. J. Limpus at Frigate Cay, Swain Reefs, Great Barrier Reef Qld (21°44'S., 152°26'E.) on 18 Feb. 86. Found sick at Alotau, Milne Bay Province, Papua New Guinea (10°18'S., 150°27'E.) on 1 June 86. 1 283 km N.

Great Cormorant *Phalacrocorax carbo*

131-25464. Nestling banded by N. J. Favalaro at Lake Bitterang, 56 km SSE Mildura, Vic. on 20 Apr. 76. Shot near Bathurst, NSW on 26 Jan. 86. over 9 years 9 months after banding. 663 km E.

Cattle Egret *Ardeola ibis*

(a) 100-62447. Nestling banded by D. S. Reimer at Palmwoods, Qld on 10 Jan. 85. "Colour marking sighted in field (band number inferred)" at Largs, NSW by M. Lambert on 4 June 86. 682 km S.

(b) 100-62793. Nestling banded by N. G. McKilligan at Melaleuca Woodlands, near Gatton, Qld on 27 Dec. 83. "Colour marking sighted in field (band number inferred)" at Seaham Swamp Nature Reserve, NSW by M. N. Maddock on 28 Aug. 86. 574 km S.

Sacred Ibis *Threskiornis aethiopia*

121-20181. Nestling banded by S. Yorke at Balnarring, Vic. on 3 Oct. 85. "Band number read in field" at Bongaree, Bribie Island. Qld on 12 Aug. 86. 1 459 km NE.

Straw-necked Ibis *Threskiornis spinicollis*

120-30579. Nestling banded by M. H. Waterman at Mullin's Swamp, near Millicent, SA on 16 Nov. 74. Found dead near Darwin, NT on 9 Aug. 86, over 11 years 8 months after banding. 2 919 km NW.

Maggie Goose *Anseranas semipalmata*

130-10436. Male banded by A. L. Hertog at Kapalga, NT on 11 Apr. 84. "Shot for food" at Four Mile Hole Billabong, Wildman River, NT on 9 Sept. 86. 23 km W.

Black Swan *Cygnus atratus*

(a) 140-30761. Male banded by R. J. Thomas at Lake Wendouree, Ballarat, Vic. on 22 Jan. 77. Found dead near Lake Burrumbect, Vic. on 10 Sept. 86, over 9 years 7 months after banding. 21 km WNW.

(b) 140-34233. Female banded by R. J. Thomas at Lake Wendouree, Ballarat, Vic. on 17 Mar. 73. Found as skeleton near banding place on 22 Sept. 86, over 13 years 6 months after banding.

Pacific Black Duck *Anas superciliosa*

(a) 110-55444. Male banded by NPWS, SA at Bool Lagoon, SA on 18 Feb. 84. Shot at Sandy Creek, Corrowong, NSW on 7 May, 86. 720 km E.

(b) 110-91884. Nestling male banded by P. J. Fullagar at "Gungahlin", Lyneham, ACT on 14 Oct. 83. "Leg and band only found" at Sandy Lagoon, Flinders Island, Tas. on 22 Feb. 86. 542 km S.

Grey Teal *Anas gibberifrons*

(a) 090-64683. Banded by K. J. Mack at Berri, SA on 19 Feb. 86. Shot at Lake George, Beachport, SA on 2 Mar. 86. 348 km S.

(b) 090-64677. Banded by K. J. Mack at Loveday Swamp, SA on 12 Feb. 86. Shot at Lake Robe, SA on 25 Feb. 86. 328 km S.

(c) 090-85574. Banded by K. J. Mack at Berri, SA on 28 Feb. 86. Shot at Blue Lake, Douglas, Vic. on 3 May 86. 417 km SE.

Whistling Kite *Haliastur sphenurus*

110-92316. Banded by J. A. Estbergs at Humpty-Doo, NT on 23 Aug. 81. Found dead near Howard Springs, NT on 24 Sept. 86, over 5 years 1 month after banding. 21 km NW.

Brown Goshawk *Accipiter fasciatus*

100-86718. Juvenile female banded by M. H. Waterman near Mallala, SA on 6 Feb. 86. "Drowned" at Bethany, near Tanunda, SA on 22 June 86. 47 km E.

Australian Hobby *Falco longipennis*

081-77353. Female banded by C. P. S. de Rebeira at Perth, WA on 19 May 84. Found dead (partially decomposed) at Warwick, WA on 31 Aug. 86. 14 km N5W.

Double-banded Plover *Charadrius bicinctus*

- (a) 040-96019. Banded by VWSG at Werribee Sewerage Farm (Spit, Port Wilson), Vic. (38°03'S., 144°32'E.) on 17 June. 79. Recaptured at Hakataramea River, New Zealand (44°44'S., 170°29'E.) on 9 Nov. 85, over 6 years 4 months after banding. 2 282 km ESE.
- (b) B53670*. Juvenile banded at Ashburton River, New Zealand (43°50'S., 171°40'E.) on 23 Nov. 85. Recaptured at Inverloch, Vic. (38°37'S., 145°45'E.) by VWSG on 9 Aug. 86. 2 239 km W.
- (c) B54259*. Banded at Rees River, New Zealand (44°46'S., 168°26'E.) on 1 Nov. 85. Recaptured at Yallock Creek, near Kooweerup, Vic. (38°13'S., 145°28'E.) by VWSG on 16 Aug. 86. 2 043 km E.

*New Zealand Banding Scheme band.

Red Knot *Calidris canutus*

051-28105. Banded by AWSG at Roebuck Bay, Broome, WA (18°00'S., 122°22'E.) on 18 Apr. 85. Recaptured at Hangzhou Bay, Shanghai, China (30°47'N., 121°25'E.) on 21 May 86. 5 399 km N.

Great Knot *Calidris tenuirostris*

- (a) 061-38249. Banded by WAWSG near Anna Plains, WA (19°15'S., 121°20'E.) on 24 Aug. 82. Recovered at Shanghai, Chongming Dao, China (31°36'N., 121°18'E.) on 16 Apr. 86. 5 627 km N.
- (b) 061-39485. Banded by WAWSG near Broome, WA (17°58'S., 122°16'E.) on 30 Mar. 82. Recovered at Shanghai, Chongming Dao, China (31°36'N., 121°18'E.) on 16 Apr. 86. 5 486 km N.

Sharp-tailed Sandpiper *Calidris acuminata*

051-02682. Banded by A. F. C. Lashmar at Rush Lagoon, Kangaroo Island, SA (35°50'S., 137°32'E.) on 29 Feb. 84. Recovered at Shanghai, Chongming Dao, China (31°36'N., 121°18'E.) in Apr. 84. 7 655 km N.

Red-necked Stint *Calidris ruficollis*

032-22550. Juvenile banded by SSG (BOAT) at Ralphs Bay (West), Tas. on 2 Jan. 83. Recaptured at Barry Beach, Corner Inlet, Vic. by VWSG on 2 Mar. 86. 488 km N.

Curlew Sandpiper *Calidris ferruginea*

040-99828. Banded by W. P. Barden on Kooragang Island, near Newcastle, NSW on 15 Oct. 82. Recaptured at Ralphs Bay (West), Tas. by PSG on 6 Dec. 86. 1 188 km SW.

Silver Gull *Larus novaehollandiae*

- (a) 081-52286. Nestling banded by R. Carrick on West Island off Victor Harbour, SA on 13 Sept. 67. Found dead at Victor Harbour, SA on 4 Nov. 84, over 17 years 1 month after banding. 8 km N.
- (b) 081-86609. Nestling banded by D. G. Nicholls on Mud Islands, Vic. on 28 Oct. 83. Found sick (later released alive) at Shorncliffe, Moreton Bay, Qld. on 29 June. 86. 1 439 km NE.
- (c) 082-58889. Nestling banded by SSG (BOAT) at Pitt Water, Barren Island, Tas. on 25 Jan. 86. Found dead at Lewisham, Tas. on 3 March 86. 113 km S.

Crested Tern *Sterna bergii*

- (a) 070-47444. Nestling banded by M. H. Waterman on Stonywell Island, The Coorong, SA on 17 Dec. 83. Found sick (later died) on beach at Scarborough, Qld on 25 Sept. 86. 1 618 km NE.
- (b) 071-24187. Nestling banded by M. H. Waterman on Stonywell Island, The Coorong, SA on 22 Dec. 84. "Entangled in fishing gear (released alive)" at Nudgee Beach, Moreton Bay, Qld on 5 July 86, over 11 years 6 months after banding. 1 604 km E.
- (c) 071-58202. Nestling banded by D. W. Watts at Pati Island, near Woodbridge, Tas, on 29 Dec. 85. Found sick (later died) at the mouth of Noosa River, Tewantin, Qld on 1 Aug. 86. 1 935 km N. (This is the longest movement recorded for this species.)
- (d) 071-59406. Nestling banded by M. H. Waterman on Penguin Island, Beachport, SA on 19 Dec. 85. Found dead at Boulder Beach, Lennox Heads, NSW on 23 June 86. 1 590 km NE.
- (e) 071-60255. Nestling banded by M. H. Waterman on Halfway Island, off Policeman's Point, The Coorong, SA on 8 Dec. 85. "Entangled in fishing gear (released alive)" at Fingal Head, NSW on 11 May 86. 1 579 km NE.

Black Noddy *Anous minutus*

061-10372. Banded by M. K. Tarburton at Vatu-I-Ra, Fiji (17°19'S., 178°28'E.) on 14 Nov. 76. Recaptured at Funafuti, Tuvalu, west of the Solomon Islands (8°00'S., 178°00'E.) on 25 Aug. 86, over 9 years 9 months after banding. 1 032 km N. (This is the oldest recorded for this species.)

Rainbow Lorikeet *Trichoglossus haematodus*

250-03415. Banded by G. D. Bell at Ku-ring-gai Wildflower Gardens, near St. Ives, NSW on 27 Apr. 86. Found dead at Wahroonga, NSW on 30 Aug. 86. 10 km W.

Eastern Rosella *Platycercus eximius*

240-02469. Nestling banded by A. H. Burbridge at Rotamah Island Bird Observatory, Vic. on 15 Dec. 82. "Collided with window of a building" (died) near banding site in Feb. 86.

Southern Boobook *Ninox novaeseelandiae*

091-08046. Female banded by M. J. Mooney at Mountain River, Tas. on 25 June 86. Recaptured at Mountain River Grove, Huon, Tas. on 1 July 86. 6 km SSW.

Sacred Kingfisher *Halcyon sancta*

050-89529. Male banded by B. Foreman at Bridgewater, SA on 29 Oct. 85. Found dead at Cox's Creek Reserve, near Bridgewater, SA on 23 Jan. 86. 4 km S.

Blackbird *Turdus merula*

061-52726. Male banded by A. W. J. Fletcher at Bellerive, Tas. on 25 Apr. 85. "Trapped accidentally in trap for terrestrial animals" (died) at Tranmere, Tas. in May 86. 5 km SE.

Grey Shrike-thrush *Colluricincla harmonica*

050-52908. Banded by P. Jackson at Somers Camp, Vic. on 19 Aug. 80. "Band number read in field" at Balnarring Beach, Vic. on 14 Sept. 86, over 6 years after banding. 4 km W.

Varied Sittella *Daphoenositta chrysoptera*

012-76133. Adult male banded by B. R. Hutchins at Sandy Creek, SA on 25 June 79. Recaptured at banding place on 25 May 86, over 5 years 11 months after banding. (This is the oldest recorded for this species.)

Yellow-faced Honeyeater *Lichenostomus chrysops*

022-26564. Banded by R. G. Cameron at Balnarring, Vic. on 21 July 84. "Collided with a window" at Rosebud, Vic. on 20 Oct. 86. 20 km W.

Singing Honeyeater *Lichenostomus virescens*

030-46820. Banded by S. J. Ambrose on Rottneest Island, WA on 5 July 81. Recaptured at banding site by D. A. Saunders on 19 Feb. 84.

White-plumed Honeyeater *Lichenostomus penicillatus*

023-46907. Banded by D. C. Paton at Gilberton, SA on 13 Apr. 86. Found dead at Glenalta, SA on 22 July 86. 11 km S.

New Holland Honeyeater *Phylidonyris novaehollandiae*

(a) 031-61587. Banded by N. Forde at Aldinga Scrub Conservation Park, SA on 7 Oct. 84. Found dead at Aldinga Beach, SA on 10 Sept. 86. 2 km NW.

(b) 031-67994. Male banded by D. C. Paton at Bracondlers Scrub near Monarto, SA on 8 May 83. Recaptured near banding place by B. A. Foreman on 29 May 86.

(c) 032-68124. Banded by B. R. Hutchins near Sandy Creek, SA on 25 May 86. "Killed by cat" at Tea Tree Gully, SA on 22 Nov. 86. 21 km S.

(d) 032-72464. Banded by D. C. Paton at Seaford, SA on 1 Jan. 86. Recovered at Port Noarlunga, SA on 28 Mar. 86. 5 km N E.

(e) 032-88152. Banded by T. J. Bradley at Hale Conservation Park, SA on 19 July 86. Recovered "inside a building (released alive)" near Blair National Park, Blackwood, SA on 2 Oct. 86. 43 km SSW.

White-checked Honeyeater *Phylidonyris nigra*

032-87465. Banded by G. D. Bell at Ku-ring-gai Wildflower Gardens, near St. Ives, NSW on 22 June 86. "Killed by cat" at St. Ives, NSW on 3 Nov. 86. 6 km SSW.

Eastern Spinebill *Acanthorhynchus tenuirostris*

(a) 013-20479. Male banded by D. Milledge at Belongil Creek, Byron Bay, NSW on 20 June 85. Recaptured at Belongil Woods Motel, Byron Bay, NSW by J. T. Willows on 31 July 85. 1 km W.

(b) 013-43063. Male banded by H. F. Recher at Brisbane Water National Park, NSW on 20 Apr. 83. "Colour marking sighted in field (band number inferred)" at Mountain Lagoon, near Kurrajong, NSW in Dec. 85. 62 km W.

(c) 014-40241. Male banded by H. F. Recher at Brisbane Water National Park, NSW on 12 June 85. Recovered ("hit by car") near Gosford, NSW by G. Logan on 4 Sept. 86. 15 km NNE.

(d) 014-54253. Female banded by S. G. Lane at Moonee, via Coffs Harbour, NSW on 19 July 86. "Killed by cat" at Coffs Harbour, NSW on 16 Aug. 86. 9 km S.

(e) 014-99792. Juvenile female banded by T. J. Bradley at Cromer Conservation Park, SA on 2 Feb. 86. Recaptured near Sandy Creek, SA on 21 June. 86. 25 km NW.

Review

Bander's Aid by K. A. and D. Rogers. Published by A. Rogers, St. Andrews. Price A\$20.00 from Author.

The idea of a practical guide to the aging and sexing of Australian birds is a good one as it will help to provide information which when properly analysed will give us a better understanding of their biology. The greater part of the 137 pages of this guide is devoted to the descriptions of 112 bush birds mainly from Victoria.

After an introductory chapter, chapter 2 describes the formats used in the species descriptions. These descriptions are set out under headings identified as "parts" 1-9, yet the descriptions themselves are not so numbered. Some re-arrangement of the information under Part 8 (sexing criteria) might be better placed in Part 6,

("sexing"). It would be preferable to eliminate this division into "parts" and adopt simple headings as used in the descriptions themselves. Chapter 3 discusses the information to be recorded and describes with illustrations the methods and techniques for taking measurements. In Figure 1 the drawing of the whole bird which illustrates the topography of a bird is incorrect; the area shown for the scapulars is that of the lesser coverts. The scapulars which are not figured are the feathers on the shoulder, not on the wing. In Figure 4 there is a reference to colour, e.g. Maroon 31 and Burnt Sienna 135, but there is no mention of the colour standards used. Chapter 4 lists some of the precautions that should be taken to ensure the birds remain unharmed. Chapter 5 gives descriptions of the species with age and sex characters.