LITERATURE

Edited by A. R. McEvey

BOOKS

Birds of Paradise and Bower Birds by E. Thomas Gilliard, 1969. London: Weidenfeld and Nicolson. Pp. xxii + 485, col. pll. 8 (photo.), 1 (painting), b. & w. ill., dendrogram, species maps, 250 x 170 mm. £(S)6.

It is fitting that the late Dr E. T. Gilliard's last published work concerns that group of birds to which he became so intimately devoted, the birds-of-paradise and bowerbirds. With Wallace, Mayr and Rand, Gilliard ranks as one of the great field-research ornithologists to have worked on New Guinea birds. His main contributions have been his elucidation of problems of critical zoogeographical areas covering the New Guinea avifauna, his concept of chequer-board variation and, above all, his theories of the evolutionary consequences of arena-behaviour in birds-of-paradise and bowerbirds. The latter are lucidly outlined in this book, making it, with its more conventional systematic and descriptive treatment of each species, the only authoritative manual of both these families available today.

The book is divided into two parts. Part I comprises introductory chapters dealing with the geographical and environmental background of the New Guinea region; the origin of the animal stocks from which birds-of-paradise and bowerbirds arose; the romantic history of discovery of the more bizarre species, the plume trade and conservation; and the evolution of the main groups and bower-building. All are written in Gilliard's natural and at time flamboyant style. If there is occasional hyperbole, such as 'tropical rainforest heavily coiffured with arboreal gardens of orchids', or 'huge' hornbills, it matters little; who could blame him for being carried away by the prodigal lushness of the Papuan rainforest? Other inaccuracies, for example, Hunstein as the 'discoverer' of *Phonygammus keraudrenii* (p. 250), the omission, from the bibliography, of some references in the text and the disproportioned distribution of *Sericulus chrysocephalus* on map 10.6, are also no more than regrettable blemishes.

In his review of the plume trade and conservation, Gilliard has asserted that hunting for plumes has as yet done no permanent harm to populations of birds-of-paradise. This contention will no doubt surprise many, though I find it convincing. As is pointed out, the birds-of-paradise can avoid local extermination through inherent behaviour such as polygyny and the ability of unplumed 'sub-adult' males to copulate. On the other hand, his implication that New Guinea's forests are endless and the concomitant analogy of cleared or grassland areas to the 'slivers of a postage stamp scattered on a football field' are serious exaggerations. There are enormous tracts of man-made grassland in the Sepik, Ramu and Markham valleys, in the mid-mountain valleys, and on the foothills and plains of the tail of New Guinea. Moreover, forests are now being destroyed at a greater rate than ever before. Conservation of primary forest has become of paramount importance; destruction of forest has already brought about the disappearance of the Blue Bird-of-Paradise and Flag birds-of-paradise (*Parotia* spp) over large parts of their range.

The chapters dealing with the evolution of birds-of-paradise and bowerbirds combine the essence of Gilliard's outstanding contributions to our knowledge of these extraordinary birds. Briefly, his hypothesis of evolution is based on the development of communal courtship (arena-behaviour) and polygyny in a starling-like group of birds in New Guinea. Surviving ancestral members today appear to be the cnemophiline birds-of-paradise. It is thought that communal breeding arrangements select especially for 'attractiveness' in males, with the result that evolution is channelled in this direction at unparalleled rates. In the birds-of-paradise it has been responsible for the gorgeous and often bizarre plumages; in the bowerbirds it has led to making display-grounds, a trend accompanied by loss of brilliant male plumage, which is thought to have resulted from the transfer of the focal point of display from the bird to the bower. This concept clarifies many of the enigmas that these birds have posed. It implies, for example, that the birds-of-paradise are monophyletic and recently evolved, which in turn explains occasional hybridism between the species and their almost complete confinement to New Guinea.

Gilliard has observed that the bowerbird assemblage is polyphyletic, coming from several independent lines of cnemophiline-like stock. Because of this the bowerbirds are not treated as a natural group but lumped with the family Paradisaeidae. My own impression is that these birds, sharing many features, represent that level of polyphylogeny which does not differ significantly from monophylogeny for the practical purposes of classification. The answer to the problem lies in Mayr's 1962 arrangement in Peters' Check-list, or in treating the cnemophiline birds-of-paradise, true birds-of-paradise and bowerbirds as three sub-families of Paradisaeidae. It is unfortunate that *Ptilonorhynchus* and *Prionodura* have been positioned incorrectly on the otherwise excellent schematic diagram of the relation of the birds-of-paradise and bowerbirds on page 41; both genera should be placed above the 'threshold of transfer' and *Prionodura* close to *Amblyornis* (see text). The discrepancies in familial and infra-familial headings in various parts of the book occur undoubtedly because of Gilliard's untimely death.

Part II deals with the species and their occurrence, and summarizes all available information. Forty-two species of birds-of-paradise and eighteen bowerbirds are recognized. They are introduced through a masterly synopsis of the characteristics—ecological and ethological organization, display, breeding system, and nest and eggs—of all genera. To compare this simple presentation of facts with Ireдale's plethora of detail, not always relevant or accurate (*Birds of Paradise and Bower Birds*, 1950, Melbourne), gives insight into Gilliard's remarkable comprehension of the group. The account of each species gives: geographical and altitudinal range, where known; description of male, female and immatures; general remarks on discovery, collections and ecology, written often in engaging narrative style; food; voice; breeding behaviour and display (including bower and behaviour at the bower in bowerbirds); nesting; races; and evolution. Well-planned maps set out the distribution of all forms, although the maps

are not always easy to find. Of interest to Australian ornithologists are the sound reasons given for treating *Ailuroedus melanotis* and *A. crassirostris* as good species. *Chlamydera maculata* and *C. guttata,* however, are lumped.

The text concludes with two appendices; one is an account of the introduction of *Paradisaea apoda* to Little Tobago Island in the West Indies, and the other a useful chronology of ornithological expeditions to New Guinea and the Moluccas.

Because birds-of-paradise and bowerbirds are so striking, the dearth of illustrations is undoubtedly the most disappointing feature of this book. Against some species, there are black-and-white miniatures taken from the plates in Sharpe's (1891–8) and Elliot's (1873) monographs. These are nevertheless very small and depict birds in distorted poses, as is so often done; at best they are better than nothing. Some birds are presented in half-plate black-and-white, a number of which are photographs of mounted specimens or posed (perhaps dead) birds in the field. Only eight species are illustrated in colour and several of them are obscure or marred by grainy reproduction. The binding is also weak.

In conclusion, it is appropriate to repeat Mary's words that Gilliard's *Birds of Paradise and Bower Birds* may be 'the starting point of a new era in their exploration'. The superfamily is of interest to anyone involved in Australasian ornithology because it is peculiarly Australasian. Although the birds-of-paradise, including all primitive forms, are largely confined to New Guinea, the bowerbirds are divided almost equally between that land (5 genera, 11 species) and Australia (6 genera, 8 or 9 species).

R.S.

Birds of the Soviet Union (Vol. IV) by G. P. Dement'ev, N. A. Gladkov, Yu. A. Isakov, N. M. Kartashev, S. V. Kirikov, A. V. Mikheev, E. S. Ptushenko, 1967. Israel Programme for Scientific Translations, Jerusalem. Pp. 683, line drawings 114, b. & w. pll. 4, maps 78, 253 x 175 mm.

Originally published in 1952 and now available as an English translation, this lithographically reproduced volume describes 177 Palaearctic species of Galliformes and Anseriformes; it follows the general layout and style of presentation of Volume III (Waders, Gulls, Rails) as outlined in an earlier review (Emu 69: 247). Reproductions of the line figures are quite good but those of the half-tone illustrations are unacceptable. There is no general index, the section on each species being found by reference to the table of contents.

The work contains a tremendous amount of information and all aspects of the subject are dealt with comprehensively. For instance, useful summaries of the main features of the hoatzin, mound-builders and guans are provided although, of course, these galliform families are not represented in the region discussed.

The taxonomic treatment is generally acceptable by present-day standards though minor flaws are reminders that the original Russian text is now nearly eighteen years old, e.g. the idea that the Australian Black Duck is a subspecies of the Asiatic Spotbill *Anas poecilorhyncha* has long been abandoned. On the other hand, the authors' remarks on the family Anatidae are as apt today as when they were written. They say, under the heading Taxonomy (p. 279), that the 'scope of individual groups still remains incompletely determined. However, the postulate that subdivision of the Anatidae into subfamilies is unjustified, since "the characters used as a basis for this division are purely adaptive" . . . is completely unconvincing, as all characters not adaptive to living conditions are gradually eliminated by natural selection. Taxonomists have no alternative but to base all classification fundamentals on adaptive characters. Seen in this light the above postulate must be rejected. Subdivision of the family of ducks and geese into categories of lesser rank is unavoidable in reviewing this extensive and relatively archaic group . . .'. The authors follow Delacour and Mayr (Wilson Bull. 1945) for the general grouping of the ducks and Peters' Checklist for the geese. In spite of its limited appeal to Australian workers most serious ornithologists should find this volume well worth having. It is nicely presented and strongly bound but the quality of the paper is such that the printing on one side of a leaf can be seen on the next page. This is a minor flaw, but it does make the text rather difficult to read.

H.T.C.

Common Australian Birds by Alan Bell with drawings by Shirley Bell, revised edition, 1969. Melbourne: O.U.P. Pp. xii + 218. Col. pll. (paintings) 105 (some double), diag. 1. 190 mm x 130 mm. $A6.50.

C. E. B.'s just criticism of the first (1956) edition of this work (Emu 56: 437) was expressed with benign regard for its aims. For this further edition thirteen years later, one still cannot criticize the author for following a Checklist the RAOU has allowed to become obsolete; thus we find swifts and *Podargus* placed in Coraciiformes, the Chough in the family Corvidae and called a crow, and the magpies called shrikes. But the fact that Mr Bell seems still unaware of the Checklist's shortcomings, even at ordinal and familial level, characterizes the book's unchanged ornithological frailty.

As a book aiming partly to provide identification of and information on Australian birds, in the reviewer's opinion it is certainly not as good as others currently available. The keys and descriptions lack precision, e.g. the white upper-tail and rump of the Swamp Harrier are called a 'white band across tail', or they indulge in sentimentality where such licence is merely a nuisance, e.g. the Bittern, a 'brown and buff hermit of the reeds'. The notes are not always accurate, as in the distribution of the Sacred Kingfisher, which wrongly excludes Tasmania, or when a heron is also called a crane without comment.

The drawings in general cannot be commended because of their disregard for the most elementary requirements, and many are plainly unacceptable. One hopes the artist will seek opinion and suggestion on any further work done.

Finally, the book is intended to convey 'something of each bird's habits and "personality" ', and indeed the text is an expression of an observer's response to Australian birds cast in phrases which often catch a living quality of the bird and brighten the imagination of the reader—'the looping cruising passage' of cuckoo-shrikes in flight, the 'sombre crew' of choughs, and the tree-creeper whose 'hours are portioned out to a steady, methodical inspection of bark'. There will always be need for appreciative writing on Australian birds and Mr Bell contributes to it in a way which no doubt increases many readers' enjoyment. Though capable of better writing, his style here tends to the precious almost to the point of excess; his 'paddock' and 'patches of timber' do not really overcome a suggestion of the thatched-cottage atmosphere, and his metaphor too completely abandons reality when an adult male wren is 'shepherded' by immature birds.

Mr Bell's appreciative eye, however, may have added to aesthetic awareness of our birds and thereby indirectly to their conservation; and who knows whether

his pen may, in some way, have contributed to still developing styles of Australian nature writing. But poor ornithology is not likely to produce the best prose on birds, nor, usually, does good writing on birds satiate the reader.

A.R.McE.

Reflections on the Colony of New South Wales by George Caley, edited by J. E. B. Currey, 1966. Melbourne: Lansdowne Press. Pp. xvi + 239, fig. 1, map 1. 240 mm x 155 mm. A5.50.

Although the title-page suggests that an annotated work will follow, this is in fact a biography of George Caley, Sir Joseph Banks's botanical collector in New South Wales from 1800 to 1810. In an appendix it contains extracts from Caley's notes on the ornithological specimens he collected and, according to the author, presented to the Linnean Society. (See however Whittell, *The Literature of Australia Birds*, p. 100 for a circumstantial account of their purchase by the Society in 1818.) The source of the extracts is not given, but by implication it is Vigors and Horsfield's paper of 1825 printed in the Transactions of the Linnean Society for 1826, in which many of the birds were described.

The notes contain Caley's own observations on behaviour and distribution of thirty-five species, with information derived from the aborigines and from other settlers. They contain some surprises, e.g., on the Spotted Pardalote, 'it is reckoned a valuable bird on account of its skin' and, on the Pied Currawong, 'it is very good eating except in the hinder parts, which have a strong goatish smell'.

The author has added to the notes 'what appear to be the appropriate modern forms' of the names of the birds discussed. So far as vernacular names are concerned it is unfortunate that he seems to have relied for several of his 'modern forms' on a work antedating the 1926 Checklist, and that he provides no ornithological reference.

R.A.B.

SHORTER NOTICES

For simplicity the names of authors of papers are accompanied by initials only.

Australasian Publications

Historical Drawings

HINDWOOD, K. A. 1970. The 'Watling' drawings, with incidental notes on the 'Lambert' and the 'Latham' drawings. Proc. R. zool. Soc. N.S.W. 1968-9 (1970): 16-32.

Mr Hindwood's long-standing research on ornithological archives of Australasia reflects credit on ornithology by contributing to the study of Australasian history in general. This paper is one of a series that has included the 'Raper' (1964), the 'Sydney' (1965) and the 'Hunter' (1965) drawings, 'all of which contributions have dealt with the historical backgrounds to the natural history paintings discussed'.

It deals chiefly with the collection known as the 'Watling' set which treats the natural history, aborigines and scenes of Port Jackson 1788-94, and is held in the British Museum (Nat. Hist.). The primary scientific significance of the ornithological drawings centres round their use as the basis of early taxonomic descriptions of Australian birds. Some are signed by Watling, but because many are by unknown artists, because various copies were made, and because the provenance is controversial, the whole story of the Watling drawings is confused and incomplete. The paper is valuable because it summarizes their known history, includes early notes concerning some species, speculates on the identity of an unknown artist, provides a list of 295 bird drawings with names of species where known, reproduces six plates (including signed and unsigned examples) and mentions incidental aspects of interest. The bibliography will quickly provide the interested student with significant references.

A.R.McE.

Behaviour

DUNLOP, R. R. 1970. Behaviour of the Banded Rail, *Rallus philippensis*. Sunbird 1 (1): 3-15.

This general account of behaviour of a local population is based on the author's observations of rails round his home on a small island in Pumicestone Channel just north of Brisbane.

D.D.D.

[*Note:* This refers to the first issue of a new journal published by the Queensland Ornithological Society. It is the first journal devoted entirely to ornithology to be produced in Queensland and is welcomed accordingly. Review Ed.]

BEVEGE, C. 1970. Behavioural note on Eastern Whiteface and Speckled Warbler. Sunbird 1 (1): 15-16.

A Whiteface spent five minutes apparently attempting to copulate with a begging fledgling Speckled Warbler. It is well known that courtship and solicitation performed by many female passerine birds have elements in common with the behaviour of young. This unusual observation emphasizes the affinity.

D.D.D.

Species

CAMERON, A. C. 1970. The vocabulary of the Noisy Miner, *Myzantha melanocephala*. Sunbird 1 (1): 17-24.

The Noisy Miner has a vocabulary of at least twenty 'words'. The author divides these into contact, conversational, mating, territorial, daylight and alarm-calls. The species has at least twelve alarm-calls, specific to various predators and 'capable of exact translation into human speech'. An analytic study, using tape-recorder and sonograph, waits to be done.

D.D.D.

RABIG, H. G. 1970. Letter-winged Kite, *Elanus scriptus*, in south west Queensland. Sunbird 1 (1): 24-26.

A flock of eighteen was observed during nine days in December 1969. The birds perched near an earth tank during the day, when they occasionally appeared to drink. They began to hunt at dusk when nocturnal Long-haired Rats *Rattus villosissimus* became active. They probably hunted all night.

D.D.D.

HANDO, R. 1970. White-headed Sittella, *Neositta leucocephala*. Sunbird 1 (1): 26-27.

The author suggests, on the basis of observations at a single nest, that immatures normally have dark heads, and that the offspring of one brood assist in feeding young of successive broods.

D.D.D.

MACDONALD, J. D. 1970. Apparent variation in Mangrove Honeyeater, *Meliphaga fasciogularis*. Sunbird 1 (1): 29-30.

Specimens in the British Museum (Nat. Hist.), taken at Proserpine, Queensland, all have a whitish streak between the black face-band (behind the eye only) and the grey crown and nape. No such feature apparently occurs on birds round Brisbane. The author wonders if it occurs on birds elsewhere.

D.D.D.

GILL, H. B. 1970. Increase in range of the Eastern Silver-eye, *Zosterops lateralis*. Sunbird 1 (1): 30.

Two adults were observed by Brig. Officer and the author ten km west of Burketown in October 1969. This locality is 720 km west of the known limit of the range.

D.D.D.

CLARKE, J. and C. 1970. Pallid Cuckoo, *Cuculus pallidus*, feeds another. Sunbird 1 (1): 30-31.

Two observations are described. The bird with food called and allowed the other to take it—quite unlike the feeding of young. Lack has recently emphasized the possible physiological significance of 'courtship feeding' by parasitic cuckoos. The EMU has published some discussion of this behaviour (Kikkawa 1968, Emu 68: 213-214). Detailed and quantitative observations are badly needed.

D.D.D.

HYEM, E. L. 1969. Butcher Bird notes. Wildl. Aust. 6: 123.

The author placed a clutch of Pied Butcherbird's eggs under a sitting Grey Butcherbird. The young sang the Grey's song with the noticeable tones of the Pied. Other significant observations include the nesting proximity of Grey Butcherbird and Noisy Miner, and the feeding of nestling Grey Butcherbirds by three previous foster offspring Pied Butcherbirds.

D.D.D.

MOORE, J. L. 1969. Observations of the Black Butcherbird. N. Qd Nat. 36 (No. 159): 4-5.

The author has seen only brown-plumaged fledglings although Cayley states that brown and black phases may occur in the same brood. The attainment of black plumage by a captured brown fledgling is described. The incredibly short period of two to three weeks for complete moult is claimed.

D.D.D.

MCBRIDE, G. 1969. Chickens on North West Island. Qd Nat. 19: 100-102.

This is a general account of the interesting social behaviour of feral fowls left on the island by guano miners in the nineteenth century. The birds now resemble the Jungle Fowl in type but retain sufficient variation for individual identification.

D.D.D.

CARRUTHERS, R. K., W. HORTON and D. P. VERNON. 1970. Distribution, habits and sexual dimorphism of the Western Grass-Wren *Amytornis textilis ballarae* Condon in north-western Queensland. Mem. Qd Mus. 15: 335-341.

The first two males collected in Queensland are described. A comparison with the two previously collected specimens (females) of this race showed marked dimorphism, the males being larger and less rufous on the flanks. Nesting and call-notes are described. It is concluded that *A. t. ballarae* will be found throughout the rugged hilly country, covered with spinifex (Porcupine Grass), of north-western Queensland, although not uniformly or continuously.

D.D.D.

TAYLOR, R. H., B. D. BELL and F. R. WILSON. 1970. Royal Albatrosses, feral sheep and cattle on Campbell Island. N.Z. Jl Sci. 13: 78.

It is recorded that breeding pairs of the Southern Royal Albatross *Diomedea e. epomophora* have almost doubled on Campbell Island since 1958. Also described is a scheme, since completed, to fence out sheep from one half of the island, to study the effects of their removal on the birds and vegetation.

H.L.S.

LAVERY, H. J. 1966–69. Queensland Dept of Primary Industries: Division of Plant Industry Advisory Leaflets Numbers: 861 Pygmy Geese in Australia; 872 The Black Duck in Queensland; 890 Water storage provides homes for waterfowl; 901 The Magpie Goose in Queensland; 911 The Black Swan in Queensland; 915 The Grey Teal in Queensland.
The Cranes of Australia. Qd agric. J. 1969: 156-162.

A.R.McE.

Overseas Publications

Ecology

WILLSON, M. F. 1969. Avian niche size and morphological variation. Am. Nat. 103: 531-542.

Studies of avian species diversity in different habitats are just beginning to appear in Australia. In this paper the author compared the bill-sizes of 55 species from tropical American lowlands with those from north temperate areas to determine whether, in fact, greater variation and generally greater niche size occurred in areas with fewer species. No such trend could be detected.

D.D.D.

RECHER, H. F. and J. A. 1969. Some aspects of the ecology of migrant shore-birds. II. Aggression. Wilson Bull. 81: 140-154.

Many aggressive interactions between various species of wader and individuals of the one species are reported. Population density, availability of food and foraging space seem to determine the frequency of aggression.

J.L.McK.

Voice

HJORTH, I. 1970. A comment on graphic displays of bird sounds and analyses with a new device, the Melograph Mona. J. Theoret. Biol. 26: 1-10.

The use of sonograms in many ornithological papers is criticized on the grounds that complex graphic displays are difficult to interpret and contain much irrelevant detail. The Melograph Mona, so called because it creates a visual drawing of a monophonic melody, was designed for medical workers wanting to measure cardiac and respiratory activity and for musicologists wanting an objective notation for solo instrument performances. Melograms produced by this machine show a graph of the melody's fundamental notes as a function of frequency and time, and a simultaneous pressure-level graph in decibels and time. This is an exciting development.

D.D.D.

Species

DICKINSON, B. H. B., and H. M. DOBINSON. A study of a Greenfinch roost. Bird Study 16: 135-146.

A Greenfinch roost, near Oxford, was studied by ringing over four winters. A rapid turnover of birds using the roost is suggested. The highest visual estimate of the number of birds roosting in any one night was 1,200. This paper is of particular interest because communal roosting of Greenfinches in Australia does not appear to be known.

J.L.McK.

WILBUR, H. M. 1969. The breeding biology of Leach's Petrel *Oceanodroma leucorhoa*. Auk 86: 433-442.

This is a study of some aspects of the breeding biology of this rare visitor to Australian waters.

J.L.McK.

PECKOVER, W. S. A little-known Bower-bird. Animals 12: 17.

A note on the bower and bower-painting of *Chlamydera cerviniventris* is illustrated with a coloured photograph of the bird at its bower.

J.L.McK.

HENNY, C. J. 1969. Geographical variation in mortality rates and production requirements of the Barn Owl (*Tyto alba* ssp.). Bird-Banding 40: 277-290.

Barn Owls from southern USA have lower mortality rates than more northern birds. Rates of production were also lower in the south.

J.L.McK.

SENGUPTA, S. 1968. Studies on the life of the Common Myna, *Acridotheres tristis tristis* (Linnaeus) (Aves: Passeriformes: Sturnidae). Proc. zool. Soc., Calcutta 21: 1-27.

Not seen, but the review in Bird-Banding 40: 334 indicates that it would be of interest to Australian workers.

J.L.McK.

NORMAN, F. I., and M. D. GOTTSCH. 1969. Artificial twinning in the Short-tailed Shearwater *Puffinus tenuirostris*. Ibis 111: 391-393.

Hatching success in duplicate egg experiments was much lower than normal. Provision of twin chicks did not result in increased chick production. It is suggested that adults may recognize their own young and tend not to adopt strange ones.

J.L.McK.

BROOKE, R. K. 1969. Age character in Swifts. Bull. Br. Orn. Club 89: 78-81.

This includes remarks on Hemiprocne, Collocalia, Apus and Hirundapus.

J.L.McK.

Behaviour

BLAKER, D. 1969. The behaviour of *Egretta garzetta* and *E. intermedia*. Ostrich 40: 150-155.

Brief descriptive accounts are given, with particular attention to displays associated with pair-formation.

J.L.McK.

Region (Oriental)

HOOGERWERF, A. 1969. On the ornithology of the rhino sanctuary Udjung Kulon in west Java (Indonesia). Nat. Hist. Bull. Siam. Soc. 23: 9-65. (To be continued.)

The locality is the western tip of Java. The bird notes give attention to voice, habitat and habits. Because many species known to Australian ornithologists are discussed this paper would interest RAOU members.

A.R.McE.

NOTICE

During 1971 the bird collections of the British Museum (Natural History) will be moved from London to the Zoological Museum, Tring, Hertfordshire. The earliest stages of the move will begin in April, and from May to the end of the year the collections will not be available to visitors. It will also be necessary to restrict access to the collections during the period January to April 1972.

The collections are being rehoused in a specially designed new building adjacent to the Museum's outstation at Tring, and with effect from 1 October 1971 the address will be:

British Museum (Natural History),
Sub-department of Ornithology,
Tring,
Hertfordshire,
England.

Tring is about 50 km northwest of London, and is served by a fast train service from Euston Station.

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