NOMENCLATURE, ETC.

A FEW explanations of the thorny question of "nomenclature" are due to the reader. It is an unfortunate fact that many people who are interested in birds as birds, and may wish to acquire information about such species as they may become acquainted with in life, from specimens exhibited in museums, or from books and periodicals devoted to the subject, are bewildered by the various names applied to what is obviously one and the same bird, and turn from the subject in disgust. To take an instance from the present volume. They may, in years past, have come across an attractive bird which they have learned to know as *Calornis chalybeus* (the glossy Malay tree-starling). Later on, they may refer to books and literature, and find no mention of their favourite, but discover another called *Aplonis panayensis strigatus*. Is it the same bird or a different one, and if the same, why has it received a longer and more cumbrous designation? I hope the reader will bear with me, if I offer the following somewhat lengthy explanation.

The father of modern systematic nomenclature was Carolus Linné, a Swedish savant, who conceived the idea that all living creatures and plants could be designated by two words, the conjunction of which would apply to that creature and that creature only. The first word was to be the name of the *genus*—an assemblage of animals (or plants) all possessing certain characters in common, and differing from all other assemblages by the sum of their characters. Similarly the second word was to be the name of the *species*—an assemblage of *individuals* agreeing with each other in their characters, and differing from similar assemblages of other individuals, within the genus, in the sum of their characters. Previous to the time of Linné, individual species had been designated by what were practically condensed descriptions, while the descriptive title applied by one naturalist might differ from that applied to the same creature by another authority. As a matter of fact the conception both of the genus and the species is, strictly speaking, of earlier date than Linné, but the fact is not material here. It was Linné who first clarified the system of nomenclature and devised the binomial system.

Linné's great work, the *Systema Naturæ*, ran through many editions, which were expanded and improved by the author, and up to quite recent times the twelfth and final edition of his work, published at Stockholm in 1766, was adopted by all naturalists as the starting-point of scientific nomenclature.

Recently, however, it has been decided that the tenth edition of Linné,

being the earliest in which the system of binomial nomenclature was first definitely adopted, shall be utilized as the starting-point of all nomenclature. This edition is dated 1758 and its adoption, in itself, has involved the changing of many names previously in general use.

As a corollary, the works of all authors subsequent to 1758, in which the binomial principle is accepted, are regarded as conferring validity on all names applied by their authors, as against names of later date.

It is a further accepted principle that the name by which any animal shall be known is that conferred by the author earliest in date—not earlier than Linné's tenth edition. This applies only to the second or specific name, the first name being frequently changed or varied from genus to genus according to the describer's or commentator's conception of the alliances and relationships of the *species* he is dealing with.

For convenience in reference the name of the author who has first described the species is added after the name—thus: *Merops viridis* Linn. If, in referring to a species, a writer sees fit to place it in a genus other than that of the original describer the name of the original author is placed in brackets: thus, *Poliomyias mugimaki* (Temm.)—Temminck having originally described the species in the genus as *Muscicapa*.

So far, good. In the process of time, however, it was discovered that the species, as an assemblage of individuals possessing certain common characters, varied within itself, and that sections, themselves with features in common, could be segregated within the species, these differences being not of sufficient importance to merit the bestowal of another *specific* name.

By the vast majority of modern naturalists it is considered that these minor differences have a real existence in nature, and that for convenience in reference, if for no other reason, they should be recognized by the bestowal of a third name added to the specific name, this name being that of a *subspecies*.

As to what constitutes a subspecies, as distinct from a species, there is much difference of opinion, and no universal agreement has been arrived at. By most modern ornithologists it is considered that, to be acceptable, the members of a valid subspecies should have characters that are reasonably constant within a given area, though these characters may show variation and continuous gradation in passing from one area to another.

If these differences are small it will not infrequently be found that in certain cases—more especially in forms inhabiting islands—gradation is not possible for physical reasons, and that the differences "jump" from one assemblage to another. In the opinion of many naturalists the absence of connecting links does not necessitate the elevation of the subspecies into a species, but others —notably in America—consider that a demonstrable gradation is necessary to constitute a subspecies, all other discontinuous variations, however small, constituting species. Resulting from these definitions it follows that two subspecies cannot exist as breeding birds in the same area, though, of course, subspecies having different breeding-grounds may be seasonal migrants to the same country. This is true of not a few birds wintering in Malaya.

The expressions, *geographical* race or *local variety*, often met with in the

writings of the older zoologists, may be regarded as synonymous with "subspecies."

As regards the degree and kind of variation sufficient to constitute a subspecies, the standard necessity alters with the views of the individual ornithologist, and with the bird with which he is dealing. Some species of birds, and the members of some families of birds as a whole, have much greater inherent variability than others, so that no general rule can be laid down.

Broadly speaking, however, it may be stated that *subspecific* variation is usually one of *degree*—such as size, or depth of tint ; if the variation is one of *kind*—such as a red instead of a yellow head—the difference may be, in most cases, regarded as specific.

We have arrived, then, at the point that in modern practice the name of a bird will be a trinomial, or in reality a quadrinomial—viz. the genus, the species, the subspecies and the author's name.

The last, apart from the convenience of reference, is a contribution to human vanity, but the second and third have a real and definite existence in nature, and the names applied to them will ultimately become stable. The genus is a different matter, and in ornithology is largely a question of convenience and personal opinion. Many authors favour very large assemblages of species within one genus, others give generic names on account of differences that some regard merely as specific. Moreover, in different families of birds the inherent differences between two genera are of a different order. There is more difference, for instance, between a lapwing and a Kentish plover than there is between a goldfinch and a bullfinch, yet each pair are in the same family.

I have now, perhaps, made clear the general rules on which names are applied in zoology, the basic principle being that the earliest name known which can be shown to apply to any animal shall in all cases be the one used. It is only by the strict application of this rule that finality in nomenclature can be arrived at.

Of late years the critical examination of books of travel, rare tracts, and even sales catalogues of collections, has resulted in many unfortunate changes in the names of common birds. From the nature of things, however, a term is set to these changes, and we are now within measurable distance of the day when the last unique tract will have been discovered on the dusty shelves of some forgotten library, the purist in zoological nomenclature will find his occupation gone, and the ordinary student will at last be supplied with names which he may use with reasonable confidence that they will not be replaced by other and unfamiliar ones.

ORTHOGRAPHY

There is yet another point connected with nomenclature that troubles the souls of many persons. Zoological names are supposed to be founded on a Latin, or at any rate a classical, basis, and, as such, specific names which are adjectival should be made to agree in gender with the genus to which they are

attached. Generic names, from their formation, are masculine, feminine or even neuter. The earlier ornithologists, with a classically trained mind, ruled out as inadmissible "barbarous" names—*i.e.* those derived from native and non-classical languages or hybrid names formed from a combination of Greek and Latin words—and had no hesitation in changing them. From this much confusion has arisen. The modern usage is to deprecate, but nevertheless to admit, such, and in other respects to use names exactly as written by the original author, the sole alteration permissible being to change the gender of the adjectival species name to agree with that of the genus to which it is attached. Names which are substantival in their formation cannot be changed, being in apposition with their genus name and not in agreement.

TRIVIAL NAMES

The bird lover is rarely satisfied when supplied with the scientific name of the bird he is interested in, but generally demands the common name. In many cases it is difficult to supply him with one in the case of exotic birds, and in many countries, and with regard to many families of birds, no general usage has, as yet, been sanctified.

In the present work I have, as far as possible, adopted the names utilized either in the first or second edition of the *Fauna of British India*, by Messrs Blanford and Oates and Stuart Baker respectively. Only in cases where these names are manifestly inapplicable to Malaya, or would tend to cause confusion, have I supplied a substitute. For some few species, for which no English titles exist, I have had to coin them. It is perhaps unnecessary to explain that these names are in no sense authoritative, in the sense that the technical names are, and the day is probably far distant when any general agreement will be arrived at in respect of them.

VERNACULAR NAMES

I have endeavoured in all cases to supply a Malay name for each species described. Many of the commoner species have a definite Malay appellation which is widespread over most of the Peninsula, and on which most Malays are agreed. Other names, again, are dialectic or of local usage, and applied to different species in different parts of the country. Many names—such as those for the barbets, the bulbuls, and for a host of small birds—are little more than of generic or even family rank, and such a name as *kĕlichap*, for instance, may apply to any one of thirty or forty small birds of widely different families, while in only very few cases have birds confined to the higher elevations, which are not visited by Malays, any names at all. Not until a thoroughly good Malay scholar, with a knowledge of dialect, becomes a competent ornithologist or vice versa, shall we get a really reliable and complete vernacular list.

I have repeatedly endeavoured to obtain Malay names for stuffed specimens, skins or drawings from peasants or others who probably knew the

birds well enough in life, but the result has never been satisfactory or consistent. The Malayan list contains about seven hundred species; probably not more than two hundred and fifty of these have reliable Malay names about which no doubt can reasonably arise.

I have, in many cases, added the Siamese names of widespread birds as published by Messrs Williamson and Herbert in their articles in the *Journal of the Natural History Society of Siam.*

Malay names from Kedah are derived from lists published by Mr A. W. Hamilton in the *Journal of the Malayan Branch of the Royal Asiatic Society,* vol. i., 1923, pp. 378-381, and vol. iii., 1925, p. 31. To all these gentlemen my acknowledgements are due.

SYNONYMY AND REFERENCES

In view of the fact that so much of the literature dealing with Malayan ornithology is scattered through books and scientific periodicals that are often difficult of access, more especially in the Malay Peninsula itself, I have cut down this rather tedious section to the narrowest possible limits.

I have cited the first description of the species and a reference to the admirable *Fauna of British India,* by Messrs Blanford and Oates, and also to the second edition of the same work, by Mr Stuart Baker, which is approaching completion. Some eighty per cent. of Malayan birds occur in identical, or almost identical, form in British India, and though, in all cases, I do not see eye to eye with Mr Baker, readers will find much apposite information on Malayan birds in his pages.

I have also, in most cases, given references to the *Catalogue of Birds* in the British Museum. This work is the foundation of all exact study of birds, and though earlier volumes are somewhat out of date, and all, coming from different pens, necessarily vary in merit, its use is essential to the serious student. The *Catalogue of Birds' Eggs* in the British Museum and Oates' edition of Hume's *The Nests and Eggs of Indian Birds* are also quoted. A recent paper by Mr Herbert on the nests and eggs of Siamese birds is also referred to when the Siamese bird is identical or closely allied to the Malayan form. Though not quoted in the text, the reader will find much useful and accurate information on Malayan birds in the long account of the "Birds of Tenasserim," by Messrs Hume and Davison, published in the periodical curiously entitled *Stray Feathers* (vol. vi.). Though issued so long ago as 1878 this work is still the standard authority on the birds of the country with which it deals. Mr Davison subsequently made large collections in Malaya, and ultimately became Curator of the Raffles Museum, Singapore, where he eventually died. His collections, now in the British Museum, have been invaluable in the preparation of the present work.

For further works dealing with Malayan ornithology the reader is referred to the Bibliography, in which most of the publications essential to the study of Malayan ornithology are cited, though, of course, there is no attempt at completeness, which would render it unduly prolix.

DESCRIPTIONS

The descriptions have been shortened to the utmost extent consistent with clearness, and the use of technical terms has been avoided as far as possible. I had hoped to have been able to supply " field characters " which would have enabled the observer to identify with certainty the living bird. Unfortunately, I found that my attempt was not satisfactory and had to be abandoned.

Keys to the various " orders " have not been supplied, and it should be understood that these constructed for the species are artificial, and will only apply to those described in the volume in which they appear.

In the final volume keys to the genera and species of all Malayan birds will appear.

MEASUREMENTS

The measurements are given in inches and decimals of an inch. The international unit, the millimetre, is really more convenient, but many people are prejudiced against. it Conversion from inches to millimetres is simple—viz. by dividing the former by four and moving the decimal point two places to the right—the result being sufficiently accurate for all practical purposes.

" Total length " is taken from the point of the bill to the end of the tail, the bird being straightened, but not unduly stretched ; it is, as a rule, useful only when taken on the recently killed bird, and not on the skin. The length of the wing is taken from the angle to the end of the flight feathers with the wing *flattened out* against the rule, not left in its natural curve. " Length of tail " is best taken with dividers, one point being inserted as far back as possible between the central pair of feathers, and the other at the tip of the longest feathers, the tail of course not being spread.

The " tarsus " is taken with dividers from the middle line of the tibio-tarsal joint to the scale marking the point of origin of the toes.

" Bill from gape " is from the gape to the point of the bill. In the flesh it is perhaps a better measurement than the culmen, used by many ornithologists, which leads to uncertainty, as some persons take it from the point of origin of the feathers of the forehead to the tip of the bill, and others from the junction of the bill with the bony skull.

RANGE IN THE MALAY PENINSULA

I have given the *extent* of country through which the species under description occurs, and the island groups in which it is found. The *type* of country inhabited and altitude attained will be found under habits.

EXTRALIMITAL RANGE

I have endeavoured to indicate the general range of the species as such, and have, therefore, in some cases, stated the habitat of closely allied subspecies which by some ornithologists might be considered identical with the Malayan forms described.

NIDIFICATION

I have in all cases given as much information as is available on the nesting habits of the species under review, and have freely drawn on the work of other ornithologists who have made a special study of this branch of the science. For various reasons our knowledge of the nests and eggs of the birds of Malaysia is not nearly so advanced as our knowledge of the birds themselves. For one thing, field conditions are difficult, vegetation being very dense and breeding seasons irregular, while little assistance from the local population has been available. I must make acknowledgments to Mr Stuart Baker for permission to utilize the accounts he has published of Mr A. T. Kellow's collection of nests and eggs from Perak, and to Mr Herbert for the extracts I have made from his illuminating accounts of the nests and eggs of Siamese birds alluded to in a previous paragraph. It is hoped that when local naturalists realize how much remains to be done in the investigation of the general economics of Malayan birds, additional information and properly authenticated material will become available.

HABITS

This section perhaps explains itself: within the necessary limitations of space and knowledge I have stated, in part from my own experience, and in part from the accounts of other naturalists, the range of each bird, type of country and altitude affected, the food, note and general associations. It is only when these facts come to be set down on paper that we realize how astonishingly meagre is our knowledge of a large number of comparatively common birds, and how different may be the habits of a bird living in Malaya from those of an identical, or almost identical, bird from, for example, Ceylon or India.

We now know, with a fair measure of completeness, what species inhabit the country, and in what respects they differ from or agree with the species inhabiting adjacent areas. But almost every particular of their life history, their exact distribution, and their inter-relations, remains to be worked out in detail.

It is in the hope that the present compilation may at any rate form a starting-point for a more intensive study of the problems I have briefly indicated in the foregoing pages, that I have undertaken the production of an account of the Birds of the Malay Peninsula, of which this is the first instalment.