

REMARKS ON THE TAXONOMY OF SOME
AMERICAN DOVES

BY DEREK GOODWIN

In the course of current examination and re-arrangement of the pigeons in the collection of the British Museum (Natural History) certain conclusions have been reached on the status of several American genera, which somewhat differ from current treatment.

Zenaida, Zenaidura, Nesopelia, Melopelia

In his catalogue of the pigeons Salvadori (1893) listed the four genera *Zenaida*, *Zenaidura*, *Nesopelia* and *Melopelia* in his sub-family Zenaidinae. He distinguished the first two as having "moderate and straight" bills and fourteen tail feathers, the tail of *Zenaidura* being "rather long, graduated or cuneate" and that of *Zenaida* "moderate and rounded". *Nesopelia* (containing the Galapagos Dove) he characterised as having twelve tail feathers, a "rather short and rounded" tail and the bill "rather long and much bent downwards", *Melopelia* (the White-winged Dove) on its lack of certain signal markings and possession of others, and also on slight differences in the shape of the inner webs of the first two primaries. Ridgway (1916) followed this classification. Peters (1934) pointed out that only one of the species, the South American *auriculata*, placed in *Zenaida* by these authors had in fact fourteen tail feathers, the others having twelve. He accordingly placed *auriculata* in the genus *Zenaidura*. He made *Melopelia* congeneric with *Zenaida*, remarking that he had looked in vain for any characters "of generic value" to separate them. He maintained *Nesopelia* by reason of its "short tail . . . and strongly decurved bill". Hellmayr and Conover (1942) followed Peters, placing the Mourning Dove *Zenaidura macroura* (Linnaeus) and the Eared Dove *Z. auriculata* (Des Murs) in *Zenaidura*; the Zenaida Dove *Zenaida aurita* (Temminck) and the White-winged Dove *Z. asiatica* (Linnaeus) in *Zenaida*, and the Galapagos Dove *Nesopelia galapagoensis* (Gould) in the monotypic genus *Nesopelia*. The A.O.U. Check-list (1957: 260-262) similarly separates *Zenaidura* and *Zenaida*.

I feel diffident about "lumping" genera, but in this instance there seems to be justification for so doing. Generic limits are largely a matter of opinion and one's opinion is guided by an appraisal of characters and the way in which other species in the same family are, or can best be grouped into genera. A genus need not consist of a discrete group (Cain, 1956) and if, as is the case with the fruit-doves of the genus *Ptilinopus* for example, it is a natural group it need not be capable of definition by

even a single character common to everyone of its members (Cain, 1954). In the current arrangement (Hellmayr and Conover, *loc. cit.*) the genus *Zenaidura*, consisting of *macroura* and *auriculata*, differs from *Zenaida*, species *aurita* and *asiatica*, in possessing an extra pair of tail feathers and proportionately slightly smaller feet and tarsi. I do not think the possession of fourteen instead of twelve rectrices can be considered a valid reason for separating into different genera two species which are so alike in their characters as are *auriculata* and *aurita*. The same view has been expressed by Bond (1940: 53, footnote 33). In coloration, and especially in detail of color-pattern, there is a great deal of uniformity in the species of both genera. All have a blackish band across the lower part of the face with an iridescent patch on the neck immediately behind it and similar and homologous tail markings. There are also black spots on the wings, although in *asiatica* these are reduced to traces of spots on the concealed basal portions of the feathers, suggesting, as was pointed out by Whitman (1919), that their reduction occurred comparatively recently in their evolutionary history. Another feature also lacking only in *asiatica*, is a black mark extending from the corner of the eye. In my opinion these plumage characters, which are correlated with a general similarity of size are, in this instance, of greater phyletic importance than the differences in the length, shape and number of feathers in the tail. This conclusion is emphasised by the fact that the tail of *auriculata* (genus *Zenaidura*) is intermediate in length and shape between those of *macroura* and *aurita* (genus *Zenaida*).

Similarly the Galapagos Dove, *galapagoensis*, does not appear to be sufficiently distinct for generic separation. Its tail is only a little shorter than that of *aurita*. Its bill (as so often in island forms) is relatively larger and the culmen perhaps slightly more curved, but these differences of bill size are not greater than those often found between races of a single species. There seem to be no grounds for Peter's opinion that "Its affinities are not clear" or that it bears only "a faint general resemblance" to *aurita* and *asiatica*. It does in fact bear a strong resemblance to *aurita* and there can be very little doubt that both have derived from a common stock. Whitman (1919) suggested that *galapagoensis* represents a form ancestral to both *aurita* and *asiatica*. He pointed out that the profuse black and white markings on its wings could well be the "raw materials" from which the signal markings on the wings of *aurita* and *asiatica* have been developed. It seems probable that the short tail and large bill are adaptations to its island habitat rather than ancestral characters.

Of the five species which I think should be grouped in the single genus *Zenaida* the North American Mourning Dove, *macroura*, and the South

American Eared Dove, *auriculata*, are sufficiently alike to be considered as members of a single superspecies. The White-winged Dove appears to stand furthest apart both in morphology and in voice and behavior (Whitman, 1919a) but its relationship with the others is quite evident and I agree with Peters that it should not be put in a separate genus.

Ectopistes

The question arises as to the generic status of the Passenger Pigeon, *Ectopistes migratorius* (Linnaeus), whose affinity to the Mourning Dove is at once evident when skins or photographs are compared. Salvadori (1893) placed the Mourning Dove in his family Peristeridae and the Passenger Pigeon in Columbidae. His criteria for recognising the former family were, tarsus as long or longer than the middle toe and from twelve to twenty tail feathers instead of always only twelve. Presumably he was influenced in placing the Mourning Dove in Peristeridae by its having fourteen rectrices. On its toe and tarsus proportions it would have qualified for his restricted version of Columbidae. The Passenger Pigeon differs, or rather differed, from *Zenaida* species in its larger size, in lacking the dark facial markings, in its pronounced sexual dimorphism, in laying only one egg to a clutch, in its markedly distinct voice and behaviour (Craig, 1911) and in its ecology (Schorger, 1955). It seems that the sum total of these differences are a good deal greater than those between any of the five species which I suggest should form the genus *Zenaida*, and therefore there is sufficient reason to keep the Passenger Pigeon in a separate genus. At the same time its very close phylogenetic relationship to *Zenaida*, should not be overlooked.

Geotrygon, Osculatia, Starnoenas

It is possible that the American Quail-Doves may be closely related to *Zenaida*. Most of them have facial markings very similar to and apparently homologous with those of *Zenaida*, but they show no such resemblance to *Leptotila* or to the old world genus *Gallucolumba* between which they are usually grouped. Apart from their white-tipped tails the *Leptotila* species do not have any striking or well-defined markings, so their lack of the facial markings common to *Zenaida* and *Geotrygon* may be of little phylogenetic significance. The case is different with *Gallucolumba* species which show very distinctive color-patterns that do not at all resemble those of *Geotrygon*. Affinity between these two genera seems to be indicated only by a striking resemblance in general form and ecology. This may be ascribed to parallel evolution—adaptation to fit similar habitats in the old and new worlds—from more divergent stocks of arboreal pigeons. However, I do not feel confident enough to argue

a case in favor of this conclusion, but only to suggest the possibility.

There seems no valid reason for keeping the Purple Quail-Dove *saphirina*, in the monotypic genus *Osculatia*. Salvadori (1893) recognised this genus on the grounds that the primaries are rather narrow and more or less tapering to a point, the first primary is attenuated at the tip and the tail shorter than half the length of the wing. Of these supposed differences the only real one is the attenuated first primary, for *Geotrygon costaricensis* (Lawrence) and *G. veraguensis* (Lawrence) have the tail shorter than half the length of the wing, and *G. montana* (Linnaeus) and *G. veraguensis* have all their primaries, excepting the outermost one, as narrow and pointed as those of *saphirina*. I do not think this single character of an attenuated first primary warrants generic separation of a species which in every other respect shows its close affinity to others not possessing it. It is proposed, therefore, to unite *Osculatia* with *Geotrygon*.

The Cuban Blue-headed Quail-Dove, *Starnoenas cyanocephala* (Linnaeus), is placed by Peters (1937) between the two monotypic old world genera *Microgoura* and *Otidiphaps* and further separated from *Geotrygon* by the genera *Gallicolumba*, *Leucosarcia* and *Trugon*. In spite of the unusual blue coloration of its head, it seems evident that the affinities of *Starnoenas* are with *Geotrygon* rather than with any old-world genus. The color-pattern of its head is very similar to those of *Geotrygon frenata* and *G. linearis*, and its coloration is not at all unlike these species, except for the blue (instead of bluish grey) on the head and the rather different shade of brown on the upperparts. Its unique features, the hexagonal scales on the front of the tarsi and the black breast patch bordered with white, are, perhaps, sufficient to justify retention of the monotypic genus *Starnoenas*, but certainly do not indicate that it might be more closely related to any oldworld forms than it is to the *Geotrygon* species, to which both its distribution and some of its plumage characters suggest it is most closely allied.

SUMMARY

The New World dove species *macroura*, *auriculata*, *aurita*, *asiatica* and *galapagoensis* can be included in the single genus *Zenaida*, thus merging the genera *Zenaidura*, *Melopelia* and *Nesopelia*.

Osculatia should be regarded as a synonym of *Geotrygon*, and *Geotrygon* is probably more closely related to *Zenaida* than to the Old World *Gallicolumba*, near which it has been placed. *Starnoenas cyanocephala* is more closely related to *Geotrygon* than it is to any Old World genus.

LITERATURE CITED

- AMERICAN ORNITHOLOGISTS' UNION. 1957. Check-list of North American Birds. 5th ed. 691 pp.
- BOND, J. 1940. Check-list of Birds of the West Indies. 184 pp. Acad. Nat. Sci., Phila.
- CAIN, A. J. 1954. Subdivisions of the genus *Ptilinopus* Bull. Brit. Mus. (Nat. Hist) Zoology, 2, no. 8.
- CAIN, A. J. 1956. The Genus in Evolutionary Taxonomy. Sept. Zool. 5, no. 3: 97-109.
- CRAIG, W. 1911. The Expression of Emotion in the Pigeons. III. The Passenger Pigeon (*Ectopistes migratorius* Linn.). *Auk*, 28: 408-427.
- HELLMAYR, C. E., and CONOVER, B. 1942. Catalogue of birds of the Americas. Field Mus. Nat. Hist., zool. ser., 13, Pt. 1, No. 1: 476-504 and 595-621.
- PETERS, J. L. 1934. The classification of some American Pigeons. *Condor* 36: 213-215.
- PETERS, J. L. 1937. Check list of birds of the World, vol. 3: 138.
- RIDGWAY, R. 1916. The birds of North and Middle America. Bull. U. S. Mus., No. 50: 339-385.
- SALVADORI, T. 1893. Catalogue of Birds in the British Museum, 21: 3, 369-400, and 537.
- SCHORGER, A. E. 1955. The Passenger Pigeon. Univ. Wis. Press.
- WHITMAN, C. O. 1919. Orthogenetic evolution in pigeons. Posthumous works of C. O. Whitman, 56-57. Carnegie Inst. Wash.
- WHITMAN, C. O. 1919a. The Behaviour of Pigeons. Posthumous works of Charles Otis Whitman, 3: 122, Carnegie Inst. Wash., Publ. No. 257.

British Museum (Natural History), Cromwell Road, London, S. W. 7 England.