

AN ARCHAEOLOGICAL RECORD
FOR THE WHITE-FACED
WHISTLING-DUCK
(*DENDROCYGNA VIDUATA*)
IN CENTRAL PANAMA

RICHARD G. COOKE
AND
STORRS L. OLSON

Large, well-preserved bone samples have been recovered at several central-Panamanian archaeological sites (Cooke 1981, 1984b). At one site, Sitio Sierra (Fig. 1), over 400 bird bone elements have been found in middens, pit-fills and cemeteries (Cooke 1984a). In one refuse pile, which on ceramic evidence dates from before A.D. 500 and which lies directly over a circular structure dated to between 2015 ± 80 and 1975 ± 80 radiocarbon years (65 B.C. and 25 B.C.; Cooke 1979), RGC recovered the partial skeleton of an adult White-faced Whistling-Duck (*Dendrocygna viduata*). The bones were found close together and were excavated by hand trowelling. Twenty-two elements can be assigned confidently to a single individual, while a further 35 (mostly vertebrae and phalanges) probably belong to it. The frontal bone is intact and demonstrates the incomplete orbital ring, which is characteristic of adults of this species. (Subadults of *D. arborea*, *D. autumnalis* and *D. bicolor* may have incomplete eye-rings, but the unfused ends are thin and pointed, differing from

the thick ends in adult *D. viduata*. For details of post-cranial elements of *D. autumnalis*, *D. bicolor* and *D. viduata*, see Campbell 1979.)

Macrobotanical, pollen, phytolithic, faunal and human demographic evidence all point to extensive agricultural activities and deforestation in the vicinity of Sitio Sierra by the time of Christ. Organisms that prefer pond, marsh and river-edge habitats prevail in the archaeological bone samples (Cooke 1979, 1984a, b). Hence, it seems likely that the White-faced Whistling-Duck was taken locally. At the same site, and in similarly dated contexts, RGC recovered nine other elements of *Dendrocygna* from at least five different individuals. (A complete coracoid is probably from a second specimen of *D. viduata*.) Also identified were two individuals of the Muscovy Duck (*Cairina moschata*) and a single individual of the Lesser Scaup (*Aythya affinis*). Both *Cairina* and *Dendrocygna* could have been domesticated or kept in temporary captivity; several bones of young ducks that could not be identified to genus were found pressed into the compacted clay of house floors.

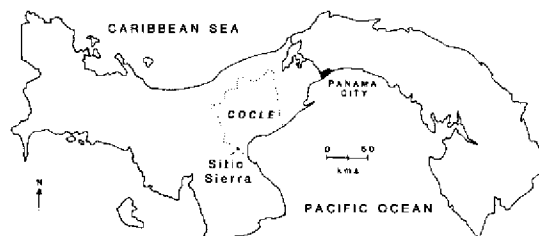


FIGURE 1. Map of Panama showing the location of Sitio Sierra and Coclé province.

The White-faced Whistling-Duck now has a disjunct distribution in the Neotropics (Blake 1977). In Panama it has not been reported since the 1940s, and the few records from before this date are from east of the Canal (Méndez 1979, Ridgely 1976:50, Wetmore 1965:140). The archaeological record from Sitio Sierra indicates that its range once included Coclé province. (*D. autumnalis* is still present in the area in small numbers; RGC saw recently-killed birds being offered for sale near Sitio Sierra in 1983.)

Pre-Columbian people are known to have affected the ranges of certain bird species. The Tufted Jay (*Cyanocorax dickeyi*) and the Great-tailed Grackle (*Quiscalus mexicanus*) were deliberately transported out of their original ranges (Haemig 1978, 1979), macaws were traded into the American Southwest (Hargrave 1970), and *Nesotrochis debooyi*, the extinct flightless rail of Puerto Rico, was probably both exterminated and carried to the Virgin Islands in prehistoric times (Olson 1983 and references cited therein).

The continuing analysis of bird bones from Panamanian archaeological middens (including the 7,000-year-old Cerro Mangote shellmound; McGimsey 1956; Cooke, Olson and Ranere, unpubl.) should provide more information on the pre-conquest distributions of other extant species whose present-day disjunct ranges are likely to have been affected by local hunting pressure.

LITERATURE CITED

- BLAKE, E. R. 1977. Manual of neotropical birds. Vol. 1. Univ. of Chicago Press, Chicago.
- CAMPBELL, K. 1979. The non-passerine avifauna of the Talara Tar Seeps, north-western Peru. Roy. Ont. Mus. Life Sci. Contrib. 118.
- COOKE, R. G. 1979. Los impactos de las comunidades agrícolas sobre los ambientes del Trópico estacional: datos del Panamá precolombino. Universidad de Panamá, Actas IV Simp. Inter. Ecol. Trop. 3:919-973.
- COOKE, R. G. 1981. Los hábitos alimentarios de los indígenas precolombinos de Panamá. Rev. Méd. Panamá 6 (1):65-89.
- COOKE, R. G. 1984a. Birds and men in prehistoric central Panama. In F. Lange [ed.], Recent developments in Isthmian archaeology. British Archaeological Reports, Oxford.
- COOKE, R. G. 1984b. Some current research problems in central and eastern Panama: a review. In F. Lange and D. Stone [eds.], The archaeology of lower Central America. Univ. of New Mexico Press.
- HAEMIG, P. D. 1978. Aztec Emperor Auitzotl and the Great-tailed Grackle. Biotropica 10:11-17.
- HAEMIG, P. D. 1979. Secret of the Painted Jay. Biotropica 11:81-87.
- HARGRAVE, L. L. 1970. Mexican macaws: comparative osteology and survey of remains from the southwest. Univ. Ariz. Anthropol. Pap. 20.
- MCGIMSEY, C. R., III. 1956. Cerro Mangote: a preceramic site in Panama. Am. Antiquity 22(2), Pt. 1:151-161.
- MÉNDEZ, E. 1979. Las aves de Caza de Panamá. Editora Renovación, Panama.
- OLSON, S. L. 1983. Biological archaeology in the West Indies. Fla. Anthropol. 35(4).
- RIDGELY, R. S. 1976. A guide to the birds of Panama. Princeton Univ. Press, Princeton, NJ.
- WETMORE, A. 1965. The birds of the Republic of Panama. Part 1: Tinamidae (Tinamous) to Rynchopidae (Skimmers). Smithsonian Misc. Collect. Vol. 150.

Smithsonian Tropical Research Institute, APO 34002, Miami. Address of second author: Division of Birds, National Museum of Natural History, Washington, D.C. 20560. Received 27 October 1983. Final acceptance 14 May 1984.