## GREATER SHEARWATER IN COSTA RICA

GAIL SPEAKER CARR

In June 1977, Karen Bjorndal of the University of Florida collected the pelvis and leg bones of a single shearwater at Tortuguero beach on the Caribbean coast of Costa Rica (10°30′N, 83°30′W). The specimen is on deposit at the University of Florida (GSC 290).

I compared the bones with skeletons of the eight species of *Puffinus* listed by Palmer (Handbook of North American birds, Yale University Press, New Haven, Connecticut, 1962). The following species were eliminated because their bones were smaller than the Tortuguero specimen: *assimilis, bulleri, carneipes, lherminieri, puffinus,* and *tenuirostris. Puffinus gravis* and *P. griseus* averaged just slightly larger than the specimen. The leg measurements for these two species overlap considerably, except for the height of the cnemial crest (Tortuguero *Puffinus*: 13.8 mm; *P. gravis*: 14.9–17.6 mm, N = 8; *P. griseus*: 18.8–20.9 mm, N = 8). The specimen agrees with *P. gravis*, the Greater Shearwater, in the following characters.

Pelvis: the proximal, dorsal edge of the ilium is broad and rounded (narrow and pointed in *griseus*).

Femur: the posterior intermuscular line extends onethird the length of the shaft from the distal end (onehalf the length in *griseus*). Tibiotarsus: (1) the proximal tip of the inner cnemial crest is more rounded (more pointed in griseus); (2) the internal ligamental prominence is high and rounded (low and ridgelike in griseus); (3) on the proximal end, in external view, the prominence extending distally from the head is indistinct (distinct in griseus).

Tarsometatarsus: (1) the anterior lip of the external cotyla dips slightly towards the distal end (dips steeply in *griseus*); (2) in external view, the external calcaneal ridge is long (short in *griseus*).

The Greater Shearwater ranges in open Atlantic waters from Tierra del Fuego to Labrador and Greenland. The Gulf of Mexico was not included in its range in the Check-list of North American Birds (Fifth ed., American Ornithologists' Union, Baltimore, Maryland, 1957). Arnold (Auk 92:394–395, 1975) first reported this species in the Gulf at Galveston, Texas. Eastern Caribbean records (Trinidad and Los Roques, Venezuela) were reviewed by Collins and Tikasingh (Bull. Br. Ornithol. Club 94:96–99, 1974). It was not listed by Slud (The birds of Costa Rica, American Museum of Natural History, New York, 1964). This then is the first record of the Greater Shearwater for Costa Rica and the western Caribbean.

I thank Pierce Brodkorb for checking the identification of the specimen and for loaning comparative material.

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