

nests 9A-6, 9A-7, and 9A-8 were not verified biochemically; in all instances in which verification has been attempted, however, genotypes have been consistent with phenotypes (Martin and Selander, 1975; Martin, 1980).

As in other instances of hybridization observed in Texas between *H. rustica* and members of the genus *Petrochelidon*, the female participants appeared phenotypically to be Barn Swallows and their heterospecific unions were transitory (Martin and Selander, 1975; Martin, 1980). Contact between these species clearly has been facilitated by human modification of the natural environment (Bent, Bull. U.S. Natl. Mus., 179:1-555, 1942; Martin and Martin, 1978). In addition to facilitating expanded sympatry and breeding syntopy, the proximate culvert environment potentially contributes to hybridization by (1) minimizing microhabitat variation at the nest site, and (2) providing surroundings conducive to further human intervention. Within culvert passages, few visual or auditory barriers exist to minimize opportunities for potential heterospecific imprinting; such opportunities are, in fact, heightened: both species tend to construct their nests on passage walls close to ceilings, and heterospecific nestlings can view each other on a common visual plane. Vocalizations are magnified within passageways, and potential nestling imprinting, as well as adult confusion of precopulatory vocal signals (both species are known to copulate at or in the proximate vicinity of the nest—Samuel, Auk, 88:839-855, 1971; Miller, Unpubl. M.A. thesis, Dept. Zool., Univ. Texas, Austin, 1975) may occur. Noise of vehicular traffic also is a possible source of auditory confusion, and adult mortality due to collisions with vehicles may result in an abnormally high percentage of laying females rendered accessible to heterospecific males through temporary matelessness. Accidental or deliberate switching of eggs from nest to nest by highway maintenance crews, itinerants, migrant workers, or others also may be a factor (we have observed occasional large-scale egg removal by humans; M. R. Lewis, R. F. Martin, unpubl.).

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ALBINISTIC GAMBEL'S QUAIL FROM EASTERN ARIZONA.—Albinism appears to be uncommon in Gambel's Quail, *Lophortyx gambelii*. Reynolds (J. Arizona Acad. Sci., 7:46, 1972) reported three separate records consisting of two partial albinos, in which some pigment is present, and one totally albinistic specimen. On 23 Jan. 1979, a partial albino Gambel's Quail was collected from a covey of approximately 40 normal-colored and two white birds in farmlands east of Safford, Graham Co., Arizona. This is the first reported observation of a single covey with mixed albinistic forms.

These birds had been observed frequently for almost 4 months in honey mesquite (*Prosopis juliflora*) and salt-bush (*Atriplex* spp.) habitat bordering a harvested barley field. The female specimen was collected and given to me by Robert Clark of Solomon, Arizona. Some dark pigmentation is present on the feet and bill, whereas eye color was described by the collector as "dark blood red." Plumage is light gray with a pale gray breast except for some light cinnamon on feathers of the flanks. Normal color pattern is faintly distinguishable on the specimen, similar to "ghost barring" on *Coturnyx coturnyx japonica* which resulted from feather structure (Lauber, Science, 146:948-950, 1964). As classified by Mueller and Hutt (J. Hered., 32:71-80, 1941), this specimen is an imperfect albino. The albinistic birds showed no behavioral abnormalities and were adept at evading collecting attempts.

Breeding experiments with California Quail (*Lophortyx californicus*) indicated that dilute plumage was due to a single recessive gene (Price and Danforth, Condor, 43:253-256, 1941). A white, pink-eyed trait in captive Japanese Quail was inherited as a sex-linked recessive (Lauber, 1964). In neither case did a mixture of albinistic forms occur within a single clutch. In the present instance, occurrence of two albinistic types within a covey may have resulted from either an aggregation of more than one brood or modified expression of a mutation within a clutch.—THOMAS O. CLARK, *Dept. of Zoology, Arizona State Univ., Tempe, AZ 85281.*

NEW LOCALITIES FOR *TANTILLA RUBRA CUCULLATA* (COLUBRIDAE) AND THE DISTRIBUTION OF ITS TWO MORPHOTYPES.—Eighteen specimens of *Tantilla rubra cucullata* have been reported in the literature (Minton, Fieldiana: Zool., 34:449-453, 1956; Degen-

hardt and Milstead, *Herpetologica*, 15:158-159, 1959; Smith and Werler, *J. Herpetol.*, 3:172-173, 1969; Easterla, *Herpetologica*, 31:234-236, 1975; and Degenhardt et al., *Texas J. Sci.*, 27:225-234, 1976). Five of these have been reported as *T. cucullata* (solid hood morphs), six as *T. diabolus* (collared morphs), one as *T. r. diabolus* (collared morph), and six as *T. r. cucullata* (four solid hood morphs and two collared morphs). The holotype is from 10 km SSE Alpine, Brewster Co., Texas, at about 1,525 m elevation in hilly grassland. The other 17 reported specimens are from Big Bend National Park, Brewster Co., all but one between approximately 1,650 and 1,700 m elevation in the Chisos Mts. (the exception was collected at 1,173 m near Volcanic Dike Overlook). This area is in "Piñon-Pine—Juniper—Oak association, and is extremely rocky with steep sloping sides" (Degenhardt and Milstead, 1959).

Raun and Gehlbach (*Dallas Mus. Nat. Hist. Bull.*, 2, 1972) list *T. rubra* from Jeff Davis Co., Texas, without reference to specimens. This record is based on a specimen in the collection of Sul Ross State Univ. (SRSU 1690, F. R. Gehlbach and J. F. Scudday, pers. comm.). According to the SRSU catalog, this specimen (male, solid hood morph) was collected on 19 Sep. 1970 18 km N Alpine "DOR on SH 188 [actually SH 118]." This locality is within Musquiz Canyon at about 1,350 m elevation. Musquiz Canyon has rocky, steep slopes with scattered oaks and junipers. SH 118 follows the canyon along a live-oak riparian floodplain.

Two other unreported specimens of *T. r. cucullata* are in the Sul Ross State Univ. collection. SRSU 1572 (male, solid hood morph) was collected 15 Sep. 1969 from near the type locality; this specimen is the largest known, with a total length of 624 mm and a SV length of 472 mm. SRSU 2923 (male, solid hood morph) was collected 11 Jun. 1972 42 km S Alpine on SH 118, Brewster Co., at about 1,300 m elevation at the base of Elephant Mtn. In addition, a fourth specimen identified as *T. r. cucullata* is missing from the SRSU collection (J. F. Scudday, pers. comm.). This specimen was collected 2 Jun. 1977 6 km E of the Boy Scout camp on Ranch Rd. 1832, Jeff Davis Co. This locality is at about 1,250 m elevation in the pass between Big Aguja Mtn. and Little Aguja Mtn. The SRSU catalog lists this specimen as a female, total length 615 mm, SV length 499 mm. The locality is described in the catalog as "oak riparian habitat," but in August 1980 there were very few oaks in this area. Instead, *Larrea*, *Acacia*, *Yucca*, and several species of grasses were dominant. The morphotype of this specimen is not recorded in the catalog.

An additional unreported specimen of the collared morph of *T. r. cucullata* recently was incorporated into the Univ. Kansas Mus. Nat. Hist. collection (KU 176979) from the Univ. Missouri at Kansas City collection. This specimen was collected on 24 Jul. 1966 on Green Gulch Rd. 2 km N of the Basin, Big Bend Natl. Park, Brewster Co., Texas.

On 25 Jun. 1979 we collected a freshly killed *T. r. cucullata* (female, solid hood morph) 18 km by road NNE Shafter, Presidio Co., Texas (29°58'N, 104°13'W). The specimen was collected at 2258 h CDT after a heavy rain. This locality is within the Cuesto del Burro Mts., approximately 80 km SW of the closest Jeff Davis Co. record and 120 km NW of the Chisos Mts. records. Elevation is approximately 1,550 m. The area is one of low hills of arid grassland; *Yucca*, *Larrea*, *Acacia*, *Fouquieria*, and *Agave lecheguilla* are common. The specimen has been deposited at Strecker Mus., Baylor Univ. (SM 12674).

The only references to reproduction in *T. r. cucullata* are those of Behler and King (*Audubon Society Field Guide to North American Reptiles and Amphibians*, Alfred A. Knopf, New York, 1979), who record that one to two eggs are laid in July, and Easterla (1975), who recorded a single female containing two eggs "within about two weeks" of hatching on 16 Jul. Dissection of SM 12674 after preservation revealed one nearly mature egg, 8 mm by 45 mm. This egg accounted for 8.9% of the weight of the specimen.

The five specimens reported here agree closely in scalation and color pattern with previously reported specimens of the respective morphotypes of *T. r. cucullata* (Degenhardt et al., 1976). The distribution of the two morphotypes should be noted; whereas 10 of the 18 specimens reported from the Chisos Mts. are collared morphs, all of the specimens from northern Brewster Co., Jeff Davis Co., and Presidio Co. are solid hood morphs. Although these two morphotypes are similar in scalation, they have never been explicitly demonstrated to be conspecific. Including both forms in *T. r. cucullata* is advisable at present, but if living material becomes available this arrangement should be tested.

We thank W. G. Degenhardt, C. H. Gorsuch, and J. F. Scudday for advise and assistance.—DAVID M. HILLIS, *Texas Natural History Collection, Texas Memorial Museum, Univ. of Texas at Austin, Austin, TX 78712* and STEPHEN L. CAMPBELL, *Strecker Museum, Baylor Univ., Waco, TX 76703* (present address DMH: *Museum of Natural History and Dept. of Systematics and Ecology, Univ. of Kansas, Lawrence, KS 66045*).