

Catalogue of American Amphibians and Reptiles.

Powell, R. 1999. *Sphaerodactylus becki*.

Sphaerodactylus becki Schmidt

Sphaerodactylus becki Schmidt 1919:520. Type locality, "from the island of Navassa." Holotype, American Museum of Natural History (AMNH) 12595, a subadult male, collected 15 July 1917 by R.H. Beck (not examined by author).

• **CONTENT.** No subspecies are recognized.

• **DEFINITION.** Thomas (1966), on the basis of 32 specimens, described *Sphaerodactylus becki* as a moderately small species (maximum SVL to 31 mm) with large, acute to rounded, swollen, almost conical, keeled, and imbricate dorsal scales numbering 28–34 (\bar{x} = 30.3) from axilla to groin. Granular scales in the middorsal area contain knoblike and hair-bearing (at least anteriorly) scale organs. Ventrals, including gular and pectoral scales, are rounded to acute, imbricate, and number 23–27 (\bar{x} = 24.5) from axilla to groin. Scales around midbody number 49–56 (\bar{x} = 52.6). Internasals number 1–2 (mode 1) and upper labials to mid-eye 3–4 (mode 4). Dorsal scales of the tail are acute, swollen, imbricate, and do not stand erect. Ventral scales of the tail are smooth, rounded, and with an enlarged midventral row. Fourth toe lamellae number 10–12 (mode 11). Central portions of escutcheons are small with slender (1–2 scales wide) extensions onto the thighs. The habitus is "moderate" and the snout relatively long and slender.

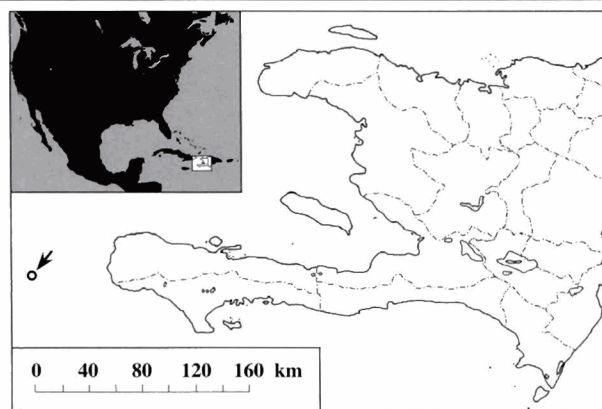
Dorsal ground color is dark brown, although light tips or centers of scales may provide a "salted" effect. Head and tail color is dull yellowish brown, with the tail color variously invaded with darker pigment. Ventral coloration is light to dark gray, and merges gradually with the darker dorsal ground color. In juveniles, light postocular stripes join on the occiput, and preocular lines extend along the canthus rostralis. Very small individuals bear two light, narrow crossbands, one across the scapular area and the other at midbody. A faint W-shaped stripe occurs across the neck and light vermiculations are evident on the throat.

• **DIAGNOSIS.** *Sphaerodactylus becki* is most similar to *S. copei* of Hispaniola, from which it can be distinguished by smaller body size (SVL to 41 mm in *S. copei*), more and smaller dorsal scales (14–22 from axilla to groin in *S. copei*), more scales around midbody (49–56, 39–52 in *S. copei*), fewer fourth toe lamellae (10–12; 10–17, mode 14 and 15 in *S. copei*), and in not being sexually dichromatic (Thomas 1966).

• **DESCRIPTIONS.** In addition to the brief original description (Schmidt 1919), Barbour (1921) and Thomas (1966) provided detailed definitions; the latter was the basis of a synopsis in Schwartz and Henderson (1991).

• **ILLUSTRATIONS.** Barbour (1921) provided line drawings illustrating the head and dorsal scales. Powell (1999) included a black and white photograph of an adult.

• **DISTRIBUTION.** *Sphaerodactylus becki* is found islandwide on Navassa where it utilizes leaf litter, loose bark, and similar retreats in moderately xeric forest, rock crevices in clearings and forest, buildings and ruins, and even empty conch shells left by fishermen. The range was illustrated in Schwartz and Henderson (1991).



MAP. The circle marks Navassa Island, throughout which *Sphaerodactylus becki* is found.

• **FOSSIL RECORD.** None.

• **PERTINENT LITERATURE.** Schmidt (1921) noted a relationship of *S. becki* with *S. scaber* of Cuba and with "*picturatus*" (= *S. copei picturatus*) of Hispaniola. Barbour (1921) also suggested a relationship with *S. scaber*. Mertens (1939) listed this species among Navassan forms having Cuban affinities. Cochran (1941) commented on the similarity of *S. becki* to *S. copei*. Lazell (1961) compared *S. becki* with *S. shrevei*. Thomas (1966) placed this species in the *scaber* group as then defined, with *S. scaber* and *S. oliveri* of Cuba, *S. anthracinus* of the Bahamas, and *S. copei* of Hispaniola. Schwartz and Garrido (1981) indicated that *S. copei* of Hispaniola was a basal member of the group, with *S. becki* representing a derived lineage.

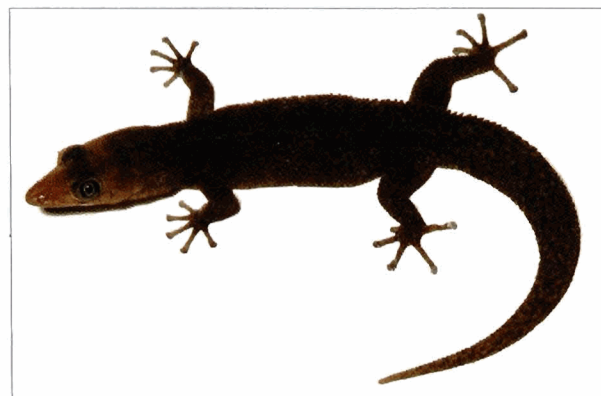


FIGURE 1. *Sphaerodactylus becki* from near the lighthouse on Navassa Island (photograph by S. Blair Hedges).

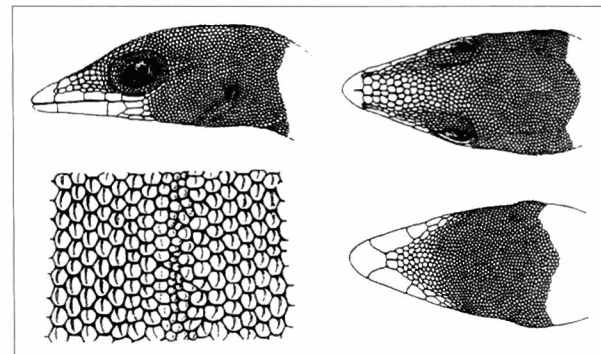


FIGURE 2. *Sphaerodactylus becki*, holotype (from Barbour 1921).

Hass (1996), based on an analysis of mitochondrial RNA sequences, placed *S. becki* in the *sputator* section, *cinereus* subsection, *cinereus* series, *copei* subseries, and *copei* species group. Powell et al. (1999) provided a historical perspective on Navassan herpetology in which they discussed *S. becki*. Powell (1999) discussed aspects of natural history.

The species was included in checklists by Barbour (1930, 1935, 1937), Schwartz and Thomas (1975), MacLean et al. (1977), Banks et al. (1987), Schwartz and Henderson (1988), Kluge (1991), and Powell et al. (1996, 1999). Banks et al. (1987) referred to this species as the "Navassa Dwarf Gecko," whereas Frank and Ramus (1995) proposed the common name, "Beck's Least Gecko."

• **ETYMOLOGY.** The species is named for R.H. Beck, collector of the holotype.

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