

holes, usually among roots. They are absent from the higher elevations of the Plateau of Iran, the highest record being 1400 m.

Distribution: Occurs in southeastern Iran (Baluchistan and Kerman Provinces), southwestern Pakistan, southern Afghanistan (Helmand drainage and northern border area of Pakistan according to Arnold, 1983:313), northern coast of Sultanate of Oman (Arnold, 1980a:295; Salvador, 1982:151); I believe F. Werner's (1895:4–5) record between Tehran and Qom to be in error.

Remarks: Arnold (1983:313–314) regards *Acanthodactylus schmidti* as the probable sister species of *A. blanfordi*, which is also closely related to the similar *A. arabicus* and its relatives.

Acanthodactylus grandis Boulenger, 1909

(Plate 11B)

Giant fringe-toed lizard, Mesopotamian fringe-toed lizard

Acanthodactylus grandis Boulenger, 1909a:189 (type locality: Jerud and Ataibé, E Damascus, and Khan Agach, between Damascus and Kutaife, Syria; syntypes: BMNH 1909.4.20.27–29/1946.9.2.69–70; MNHNP 23.8–11). — Salvador, 1982:110–113; figs. 66–68, map 22. — Arnold, 1983:316–317. — Leviton, *et al.*, 1992:52–53, col. pl. 8B. — Welch, 1983:30.

Acanthodactylus fraseri Boulenger, 1918c:373 (Type locality: Zobeya [=Az Zubayr, 30°23'N, 47°43'E], Shariba, Iraq. Syntypes [BMNH 1917.6.18.3/1946.8.7.40] and BNHM). — S. Anderson, 1968:333; 1974:40, 43. — Welch, 1983:30.

Diagnosis: (Fig. 87) Four supraoculars (4th broken up in all specimens I have seen); one row of granules between supraoculars and superciliaries; usually 4 supralabials to below center of eye; temporals granular, not keeled; ventral plates not forming straight longitudinal series, 14–16 in longest transverse row; 18–22 dorsal scales in transverse series between hind limbs; 4 series of scales around fingers; lateral fringe on toes scant (well-developed on Iranian specimens checked by Salvador, 1982; the fringe is never really absent, in as much as the extra row of scales that forms it is always there).

Color pattern: (Fig. 88) Gray above in alcohol, tan or light brown in life, with 4 longitudinal lines of conspicuous small black spots superimposed on a pattern of pale bluish-gray spots (creamy white in life), these spots narrower than spaces between lines of spots; dark spots of dorsum sometimes coalesce transversely or longitudinally to form reticulations; flanks with less regularly arranged dark markings; venter cream to grayish white (based on Iranian specimens).

Size: Largest Iranian specimen examined: snout-vent length 74 mm, tail 122 mm.

Natural history: Females collected January 6–11 and 17–20, 1963 by Street Expedition

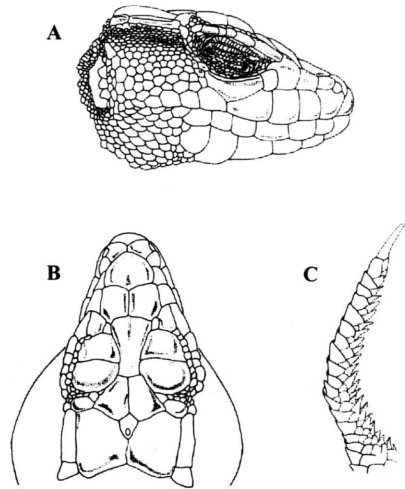


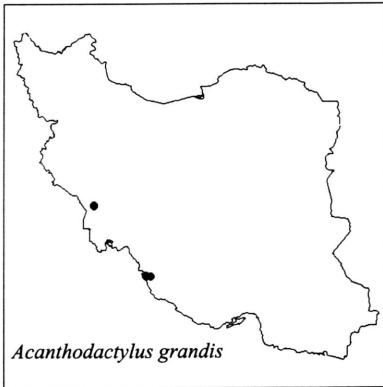
FIGURE 87. *Acanthodactylus grandis* (BMNH 1909.4.20.29, syntype). (A) Side of head; (B) top of head; (C) side of fourth toe. (From Salvador, 1982, figs. 66–68.)



FIGURE 88. Dorsal view of *Acanthodactylus grandis* showing typical color pattern (CAS 102535). (Photo by A. Leviton.)

contain yolked ovarian follicles, the largest 3 mm diameter. Stomachs of these specimens contain ants, ant larvae, wasps, and beetles. They were active when the air temperature was 38°C, sand surface 42.5°C.

Habitat: (Plate 21G) I found this species only on active dunes on which low thorny shrubs were growing. Some of these areas were under cultivation for cucumbers.



Distribution: Eastern Lebanon, Jordan, Syria, Iraq, northern Saudi Arabia, and the Mesopotamian lowlands of Khuzestan and Fars in southwestern Iran.

Remarks: Variation across Iraq appears to connect *Acanthodactylus fraseri* with the Syrian specimens described as *A. grandis* (Arnold, 1983:317). The dorsal scales of Iranian specimens and the types of *A. fraseri* from southeastern Iraq are larger than those of the Syrian animals and strongly keeled, rather than smooth. Salvador (1982:110) has placed *A. fraseri* in the synonymy of *A. grandis*, and has commented on the variation correlated with geography. The specimens collected by the Street Expedition to Iran in

1962–63 were the first records of the species from Iran. Haas's (1957:72) specimens identified as *A. fraseri* from Arabia were redetermined and described by Leviton and S. Anderson (1967:171–178) as new species (*A. gongrorhynchatus* and *A. haasi*), while a specimen from Badanah, northern Saudi Arabia, identified by Haas (1960) as *A. scutellatus*, was identified as *A. grandis* by Salvador (1982:110). Schmidt's (1941:162) specimen of *A. fraseri* from north-central Saudi Arabia appears to be a juvenile *A. schmidtii*.

Salvador (1982:112) cites a specimen (MNHN 1966.45) from Khash, 28°14'N, 61°14'E as this species, but this locality is in Baluchistan, far to the east of the next nearest locality, and beyond his stated limits of distribution. This locality is not plotted on his map.

Arnold (1983) regarded both nominal species as part of what he termed the *A. grandis* complex:

"It is possible that the *A. grandis* complex is best regarded as a single species but available samples are too small and scattered to be certain about this. The irregular variation of populations intermediate between typical *A. grandis* and *A. fraseri* may reflect the geography of Mesopotamia, for here the comparatively arid country favored by *Acanthodactylus* is divided up by the Tigris and Euphrates rivers and their tributaries which flood

seasonally, so populations may be substantially discontinuous. Other *Acanthodactylus* species, especially *A. boskianus*, also show considerable variation in this area.”

Subsequently, however (Arnold, 1986c:424), he accepted the synonymy of the two names without further comment.

Acanthodactylus grandis appears to be the sister taxon to *A. schreiberi* plus *A. boskianus* (Arnold, 1983:333).

***Acanthodactylus micropholis* Blanford, 1874**

(Plate 11C)

Yellow-tailed lizard, Persian fringe-toed lizard

Acanthodactylus micropholis Blanford, 1874b:33 (Type locality: Magas, Iran [designated by Smith, 1935:373]; Syntypes: BMNH 1946.9.3.71–72; ZMB 9333; ZSI 5301 [fide Das, et al., 1998]); 1876:383, pl. 26, fig. 2. — Bedriaga, 1879:31. — Lataste, 1885:503. — Boulenger, 1887a:63; 1890b:171. — Nikolsky, 1899b:394–395. — Zarudny, 1903:17–18. — Boulenger, 1918b:147; 1921:76–78. — Smith, 1935:373. — F. Werner, 1936:201. — Forcart, 1950:149. — S. Anderson, 1963:475; 1968:333; 1974:40, 43. — Schleich, 1977:127, 129. — Salvador, 1982:19–22, figs. 1–3, map 1. — Arnold, 1983:311. — Welch, 1983:30. — Welch, et al., 1990:114.

Diagnosis: (Fig. 89) Only 2 entire supraoculars; one or 2 rows of granules separating supraoculars and superciliaries; 4 supralabials anterior to subocular; minute smooth temporals; ventrals in 10 straight longitudinal series; dorsals feebly keeled, 48 or more across middle of body; 3 series of scales around fingers.

Color pattern: (Fig. 90) Gray above in alcohol, light brown in life, usually with 7 white or cream (sometimes bright yellow in life) longitudinal streaks on body, sometimes with light spots in dorsolateral dark stripe; interspaces between light streaks often blackish, with a series of small, round white dots; vertebral stripe bifurcates on nape; limbs with light spots on light brown ground; venter white or cream; in life, tail is sometimes (perhaps seasonally) bright yellow.

Size: Snout-vent length 63 mm, tail 125 mm.

Habitat: According to Blanford (1876:383) this species occurs in situations similar to those in which “*A[canthodactylus]. cantoris*” (*A. blanfordi*) is found, but at higher elevations, being less abundant than the latter near the coast, replacing it completely over 3000 ft (915 m). Minton found that in Pakistan it prefers sandy stream beds and canyons; *A. blanfordi* inhabits sandy alluvium between hills and sea coast, the two species meeting only at the mouths of canyons. I found it at only one locality along the coast, on ground at the base of a shrub growing on roadside rubble. The soil in the area was gravelly, the vegetation scattered low desert shrubs. There was no sandy soil in the vicinity.

Distribution: Southeastern Iran (Kerman and Baluchistan), Qeshm Island in the Persian Gulf, southern Pakistan east to Las Bela (Minton, 1966:108; Salvador, 1982:19–20).

Remarks: In his description of this species, Boulenger (1921:76–78) says, “56 to 63

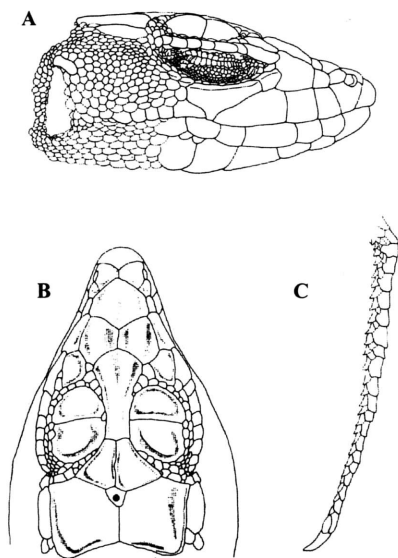


FIGURE 89. *Acanthodactylus micropholis* (BMNH 74.11.23.78, syntype). (A) Side of head; (B) top of head; (C) side of fourth toe. (From Salvador, 1982, figs. 1–3.)