

TAXONOMIC STATUS OF THE MADREAN ALLIGATOR LIZARD
(LACERTILIA: ANGUIDAE) OF THE SIERRA DEL NIDO,
CHIHUAHUA, MÉXICO

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ABSTRACT—New evidence is presented that suggests that the single specimen of *Elgaria usafa* from the Sierra del Nido in Chihuahua is an aberrantly patterned *E. kingii*. We suggest that *E. usafa* be considered a junior synonym of *E. kingii*.

RESUMEN—Presentamos evidencia nueva que sugiere que el único espécimen de *Elgaria usafa* de la Sierra del Nido en Chihuahua es un patrón aberrante de *E. kingii*. Sugerimos que *E. usafa* sea considerado un sinónimo menor de *E. kingii*.

Smith et al. (2003) described a new species of alligator lizard, *Elgaria usafa*, from the Sierra del Nido of north-central Chihuahua. This description was based on one specimen that exhibited unusual color and pattern differences not previously noted elsewhere for the closely related species *E. kingii*, and not found in 10 additional specimens of *E. kingii* from adjacent areas in Chihuahua examined by Smith et al. (2003). This evidence suggested that the Sierra del Nido specimen was indeed unique in its color and pattern, and that these differences were categorical. Upon the further examination of additional material from the Sierra del Nido and other areas in Chihuahua, however, it was discovered that the single specimen of *E. usafa* probably represents an aberrantly patterned *E. kingii*, and as such, is not worthy of formal recognition.

The single specimen of *E. usafa*, as described by Smith et al. (2003), is diagnosed from *E. kingii* based on its overall dark coloration caused by dark interspaces, mostly one scale long, between uniformly dark crossbars, black markings on the sides of the body, a mostly dark lateral fold, and a dark head and neck. Shortly after the discovery of *E. usafa* and subsequent to its publication, however, another *Elgaria* exhibiting the same aberrant pattern was

found by JLE near San Juanito in south-central Chihuahua. This specimen (UBIPRO-10573), illustrated in color in Lemos-Espinal et al. (2004:57), exhibits the same dark coloration and patterning as the Sierra del Nido specimen. Furthermore, additional preserved specimens of *Elgaria* from the Sierra del Nido in the Sul Ross State University (SRSU 4656, 4740) and Universidad Autónoma de Nuevo León (UANL 5700, 5701) collections are in agreement in color and pattern with *E. kingii*, not *E. usafa*. In the 3 adult specimens (SRSU 4656, 4740, and UANL 5700), the crossbands are brownish colored with distinct black edging, the interspaces between the crossbands are distinct and usually 2 or more scales wide, the lateral fold is light colored, and the sides of the body are sparsely mottled.

The findings presented herein suggest that the aberrant color and pattern found in the original specimen of *E. usafa* is not unique (as evidenced by UBIPRO-10573) and that other *Elgaria* from the Sierra del Nido do not exhibit this dark, aberrant coloration. In light of this, we suggest that *E. usafa* be considered a junior synonym of *E. kingii*.

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UNUSUAL TAIL MEASUREMENTS OF *BUBO VIRGINIANUS* FROM TEXAS

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ABSTRACT—We performed Exploratory Data Analysis on data sets assembled to determine subspecies limits of great horned owls (*Bubo virginianus*) in Texas; the results revealed unusual patterns of tail measurements. In the subspecies *B. v. pallascens*, tail lengths of males (206.0 mm) were longer than those of females (202.5 mm). Additionally, tail length was longer in intergrades (males = 209.4, females = 213.5) than for either subspecies (*B. v. virginianus* males = 206.2, females = 209.0; *B. v. pallascens* males = 206.0, females = 202.5).

RESUMEN—Realizamos un Análisis Exploratorio de Datos para determinar límites de subespecies del búho cornudo (*Bubo virginianus*) en Texas; los resultados revelaron un patrón inusual en las medidas de la cola. En machos de la subespecie *B. v. pallascens* la longitud de la cola (206.0 mm) fue más larga que en las hembras (202.5 mm). Adicionalmente, la longitud de la cola fue más larga en estados intermedios (machos = 209.4, hembras = 213.5) que en las otras subespecies (*B. v. virginianus* machos = 206.2, hembras = 209.0; *B. v. pallascens* machos = 206.0, hembras = 202.5).

In most avian species where sexual size differences occur, the male is larger than the female. However, most birds of prey (raptors and owls) and some seabirds (jaegers and frigatebirds) show reversed sexual size dimorphism (RSD), with the female larger than the male (Amadon, 1959). RSD does not seem to be phylogenetically constrained, but rather is a species-specific characteristic (McGillivray, 1989). McGillivray (1989) measured a suite of 18 skeletal characteristics of great horned owls (*Bubo virginianus*) that grouped into 4 skeletal complexes (body, leg, wing, and head) and found the typical RSD pattern. Sunde et al. (2003) measured body length and mass, 3 wing measurements, and hallux diameter in tawny

owls (*Strix aluco*); they also reported the typical RSD pattern.

Several hypotheses have been proposed to explain the function of RSD. One of these suggests that dimorphic size classes between the sexes of a mated pair permits differential habitat use and prey consumption between males and females, leading to decreased competition and, consequently, higher reproductive fitness (Storer, 1966; Earhart and Johnson, 1970; Temeles, 1985). This is especially important in cases where a pair has a limited area due to territoriality (Sunde et al., 2003) or a spatially limited patch of habitat. Larger size of the female also can enable her to better defend more optimal foraging grounds to feed her off-