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# HERPETOLOGICAL REVIEW

## THE QUARTERLY BULLETIN OF THE SOCIETY FOR THE STUDY OF AMPHIBIANS AND REPTILES

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to participate in determining the Society's activities; also, many international members attend the annual meetings and serve on editorial boards and committees.

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The Society for the Study of Amphibians and Reptiles, the largest international herpetological society, is a not-for-profit organization established to advance research, conservation, and education concerning amphibians and reptiles. Founded in 1958, SSAR is widely recognized today as having the most diverse society-sponsored program of services and publications for herpetologists. Membership is open to anyone with an interest in herpetology—professionals and serious amateurs alike—who wish to join with us to advance the goals of the Society.

All members of the SSAR are entitled to vote by mail ballot for Society officers, which allows overseas members

### Future Annual Meetings

**2014** — Chattanooga, Tennessee, 30 July–3 August (JMIH with ASIH, HL, and AES)

**2015** — Lawrence, Kansas 30 July–3 August (SSAR with PARC and KHS)



FIG. 1. A Senegal Kingfisher (*Halcyon senegalensis*) with an adult Günther's Gliding Lizard (*Holaspis guentheri*).

weghe 2008. Reptiles du Gabon. Smithsonian Institution, Washington. 272 pp.). It is the first time that this specific predator-prey relationship is reported.

We thank ornithologists Patrice Christy and Jean Pierre Vande weghe (Libreville) for the confirmation of the identification of the kingfisher and discussions on its ecology.

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**LIOLAEMUS MONTICOLA (Mountain Lava Lizard). PREDATION ON LIOLAEMUS LEMNISCATUS.** *Liolaemus* is a diverse genus of small to medium-sized, omnivorous lizards, distributed in the southern hemisphere of the Neotropical realm. *Liolaemus monticola* is endemic to Chile and is distributed in Andean scrub from Coquimbo to Maule regions, from 500–3000 m elev. (Pincheira-Donoso and Nuñez 2005. Publ. Ocas. Mus. Nac. Hist. Nat. Chile 59:1–486). This species is an active forager on insects with more than 50% of its reported diet as ants (Fuentes and Ipinza 1979. J. Herpetol. 13:123–124; Vidal and Labra 2008. Herpetología de Chile. Science Verlag, Santiago. 593 pp.). Here I report an observation of saurophagy.

On 21 January 2011, at 1100 h, on a sunny day with an ambient temperature of 22°C, an adult *L. monticola* (mean SVL 157



FIG. 1. *Liolaemus monticola* eating a juvenile *L. lemniscatus*.

mm and tail length at 94 mm) was observed attacking and then ingesting a juvenile *Liolaemus lemniscatus* (SVL = 45 mm) at Fundo Las Lomas, Colina County, Metropolitan region, Central Chile (33.065546°S, 70.670172°W, WGS84; elev. 810 m). The adult was resting in the soil and then chased the *L. lemniscatus* when it approached, taking ca. five minutes to capture and ingest the small lizard, and then sought refuge under some rocks. The habitat was an open and rocky scrubland dominated by *Baccharis linearis* and *Proustia cuneifolia*, with an additional assemblage of annual forbs. The area is not currently pristine with the original vegetation showing anthropogenic disturbance as a result of wood and charcoal extraction, and livestock use. To my knowledge, this is the first record of saurophagy for *L. monticola* as well as for the entire genus of *Liolaemus* (cf. Vidal and Labra, *op. cit.*).

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**LIOLAEMUS WIEGMANNII. PREDATION.** Lizards are typical prey items for birds, however direct observations of predation are relatively rare in the field. The sand lizard *Liolaemus wiegmanni* (SVL = 42–64 mm), is largely restricted to sandy soils of a vast region of Argentina and Uruguay (Ceï 1993. Reptiles del Noroeste, Nordeste y Este de la Argentina. Museo Regionale di Scienze Naturali. Torino, Italy. 949 pp.). This species occurs along coastal sand dunes of the Buenos Aires Province in semi-fixed dunes, usually far away from open spaces and beach (Block et al. 2012. J. Herpetol. 46:608–613). This note reports a single observation of predation on *Liolaemus wiegmanni* by a Burrowing Owl (*Athene cunicularia*). The Burrowing Owl is commonly found in grassy plains of Argentina, being the most abundant owl in agroecosystems (Bellocq and Kravetz 1994. Ecol. Austral. 4:29–34). Reptiles, like the sand lizard, are generally less common prey item in the owl's diet (0.3%, Sanchez et al. 2008. Ornitol. Neotrop. 19:71–80).

During a lizard survey through coastal sand dunes in Arenera Galati (37.38658°S, 57.05781°W; datum Campo Inchauspe), Buenos Aires Province, on 31 October 2008 at 1030 h, we observed the carcass of an adult female of *L. wiegmanni* (SVL = 52 mm; total length = 64 mm) lying a few centimeters away from an *A. cunicularia* burrow. The burrow was located on a dune and the owls were present at the moment of the observation. The lizard's body was completely intact suggesting that the lizard had been recently caught. The specimen of *L. wiegmanni* (UNMDP 1778) was deposited in the Herpetological Collection of the Universidad Nacional de Mar del Plata, Buenos Aires, Argentina.

**CAROLINA BLOCK** (e-mail: cblock@mdp.edu.ar), **OSCAR A. STELLATELLI** (e-mail: os2830@gmail.com), and **LAURA E. VEGA**, Laboratorio de Vertebrados, IIMyC, CONICET - Facultad de Ciencias Exactas y Naturales, Universidad Nacional de Mar del Plata, Funes 3250 (B7602AYJ) Mar del Plata, Buenos Aires, Argentina (e-mail: levega@mdp.edu.ar).

**MEROLES CUNEIROSTRIS (Wedge-snouted Sand Lizard). CANNIBALISM.** Cannibalism has been observed in a diverse number of reptile species; numerous studies have shown that it is not only common, but that it may play an integral role in shaping the ecology of a species and community dynamics (Fox 1975. Annu. Rev. Ecol. Syst. 6:87–106; Jenssen et al. 1989. Anim. Behav. 38:1054–1061; Keren-Rotem et al. 2006. Behav. Ecol. Sociobiol. 59:723–731). Studies suggest that cannibalism is common in generalist predators that might prey on conspecifics opportunistically. This pattern has been observed in diverse

taxa, and most reported cases involve larger individuals feeding on younger, smaller conspecifics (e.g., Polis and Myers 1985. *J. Herpetol.* 19:99–107; Pincheira-Donoso 2012. *Anim. Biol.* 62:277–287; Siqueira and Rocha 2008. *S. Am. J. Herpetol.* 3:82–87). Among lacertid lizards, cannibalism has been mainly documented among island species characterized by high population densities and limited food resources (Amat et al. 2008. *Amphibia-Reptilia* 29:329–336; Pafilis et al. 2009. *Naturwissenschaften* 96:1107–1113; Perez-Mellado and Corti 1993. *Bonn. Zool. Beitr.* 44:193–220; Žagar et al. 2012. *Acta Herpetol.* 7:29–39). This behavior, however, has been poorly documented among continental species.

On 27 December 2011 near the Gobabeb Training and Research Centre, Erongo, Namibia (23.561986°S, 15.041616°E, datum WGS84; 408 m elev.) we observed a juvenile *Meroles cuneirostris* being eaten by a conspecific adult female (SVL = 44 mm; tail length = 72 mm; 2.6 g). At ca. 1100 h, while attempting to capture the juvenile, an adult female dashed from underneath a small bush and began to chase the juvenile. The chase lasted less than 30 sec. before the female captured the juvenile, biting down on its head and then violently shook her own head. The juvenile then briefly escaped but was recaptured in the same manner. The female relocated to a spot underneath the bush where initially observed and continued to grip the head and neck of the juvenile as it struggled to escape, tightening her grip every few moments. After several minutes the juvenile became lifeless, and the female began to swallow the juvenile whole, headfirst. The entire consumption of the juvenile was completed in ca. 3 min., during which time the female appeared to have no trouble swallowing. Afterward the female remained under the bush for nearly 5 min. and then sprinted ca. 30 m away across the open sand.

There have been no prior examples of cannibalism in any *Meroles* species to date. The diet of *M. cuneirostris* is primarily insectivorous, and relative food availability is thought to remain constantly low throughout the year in this temperate desert climate (Goldberg and Robinson 1979. *Herpetologica* 35:169–175). At the time of this observation, median juvenile SVL for this population was 33 mm (range = 27–42 mm; N = 53).

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**MESALINA OLIVIERI (Olivier's Sand Lizard). CESTODE ENDOPARASITES.** *Mesalina olivieri* is known from Algeria, Western Sahara, Tunisia, Libya, Egypt, Israel, Jordan, Iraq, and Saudi Arabia (Bar and Haimovitch 2011. *A Field Guide to Reptiles and Amphibians of Israel*. Herzliya, Israel. 245 pp.). We know of no endoparasite records for this species. The purpose of this note is to establish the initial helminth list for *M. olivieri*.

One female *M. olivieri* (SVL = 48 mm) collected April 1956 in the Central Negev Region, Israel and deposited in the herpetology collection of the Tel Aviv Museum of Natural History (TAUM), Tel Aviv, Israel as TAUM 2201, was examined for endoparasites. A lateral slit was made on the left side and the coelomic cavity was examined for endoparasites using a dissecting microscope. Found were 30 oblong whitish, bodies measuring ca. 1 mm in length. They were regressively stained in hematoxylin, cleared in xylol, mounted in balsam, studied under a compound microscope and identified as tetrathyridia larvae of the

cestode, *Mesocestoides* sp. Voucher helminths were deposited in the United States National Parasite Collection, USNPC, Beltsville, Maryland as USNPC 107017. The life cycle of *Mesocestoides* sp. is unknown but is thought to utilize three hosts, a vertebrate definitive host, a vertebrate second intermediate host and an arthropod first intermediate host (Rausch 1994. *In* Khalil et al. [eds.], *Keys to the Cestode Parasites of Vertebrates*, pp. 309–314. CAM International, Oxon, U.K.). Tetrathyridia are commonly found in the body cavities of amphibians, reptiles, and rodents (Padgett and Boyce 2004. *J. Parasitol.* 90:108–113). *Mesocestoides* sp. was previously reported in the congener *M. guttulata* from Israel (Goldberg and Bursey 2012. *Herpetol. Rev.* 43:136). *Mesocestoides* sp. in *Mesalina olivieri* is a new host record.

We thank Shai Meiri (TAUM) for permission to examine *M. olivieri*, Ezra Maza for facilitating the loan, and the National Collections of Natural History at Tel Aviv University for providing *M. olivieri* for this study.

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**MESALINA OLIVIERI (Olivier's Sand Lizard). REPRODUCTION.** *Mesalina olivieri* is known from Algeria, Western Sahara, Tunisia, Libya, Egypt, Israel, Jordan, Iraq, and Saudi Arabia (Bar and Haimovitch 2011. *A Field Guide to Reptiles and Amphibians of Israel*. Pazbar LTD, Herzliya, Israel. 245 pp.). Schleich et al. (1995. *Amphibians and Reptiles of North Africa*. Koeltz Scientific Publishers, Koenigstein. 627 pp.) reported *M. olivieri* from Oran, Algeria commenced mating in October after emergence from aestivation, females with fully developed eggs occurred from mid-October to the end of May, and at least two clutches of 2–4 eggs were produced. In Jordan, clutches of 4–8 eggs were produced (Disi et al. 2001. *Amphibians and Reptiles of the Hashemite Kingdom of Jordan*. Edition Chimaira, Frankfurt am Main. 408 pp.). In this note I present information on the reproductive cycle of *M. olivieri* from Israel.

A sample of 39 *M. olivieri* collected 1941 to 1965 in Israel consisting of 16 adult males (mean SVL = 44.6 mm ± 2.9 SD, range = 40–50 mm), 17 adult females (mean SVL = 44.6 mm ± 3.3 SD, range = 40–51 mm), 2 juvenile males (mean SVL = 37.0 mm ± 2.8 SD, range = 35–39 mm) and 4 juvenile females (mean SVL = 38 mm ± 1.7 SD, range = 35–39 mm) was examined from the National Collections of Natural History at Tel Aviv University (TAUM), Tel Aviv, Israel by Region Name: Arava Valley TAUM 1832, 2602, 4113; Central Negev TAUM 1121, 1480, 1481, 1483, 1486, 1490, 1731, 1741, 2201, 2475, 2500, 2501, 3438, 4367, 5964, 5982; Northern Negev TAUM 1116, 1131, 1445, 1479, 1484, 1485, 1492, 1496,

TABLE 1. Monthly stages in the ovarian cycle of 17 *Mesalina olivieri* females from Israel; one April female (\*) with oviductal eggs was also undergoing yolk deposition.

Month	N	Quiescent	Early yolk depositon	Follicles > 4 mm	Oviductal eggs
January	1	0	0	1	0
March	6	1	2	1	2
April	9	2	3	1	3*
November	1	1	0	0	0