***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: A'rava 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

1967, 3682, 3951, 3991, 3996; Southern Coastal Plain TAUM 1493, 1495, 2064, 2456, 2953, 2954, 5965.

The left testis was removed from males and the left ovary was removed from females for histological examination. Gonads were embedded in paraffin and histological sections were cut at 5 µm and stained with hematoxylin followed by eosin counterstain. Enlarged ovarian follicles (> 4 mm) and oviductal eggs were counted. No histology was performed on them. Histology slides were deposited at TAUM.

Two stages were observed in the testicular cycle: Spermiogenesis, (seminiferous tubules are lined by sperm or clusters of metamorphosing spermatids); Recrudescence (proliferation of germ cells prior to spermiogenesis), was observed in two juvenile males from September, measuring 35 mm and 39 mm SVL, respectively). Males exhibiting spermiogenesis by month were January (N = 1), March (N = 4), April (N = 8), May (N = 1), November (N = 1). The smallest reproductively active male measured 40 mm SVL (TAUM 1121) and was collected in April. The presence of the November male undergoing spermiogenesis suggests *M. olivieri* exhibits a testicular cycle similar to the congener *Mesalina guttulata* from Israel (Goldberg 2012. Zool. Mid. East 56:27–30) which also initiates sperm formation in autumn.

Four stages were noted in the ovarian cycle of *M. olivieri* (Table 1): Quiescent (no yolk deposition; Early yolk deposition (yolk granules in the ooplasm); Enlarged ovarian follicles > 4 mm; Oviductal eggs. The smallest reproductively active *M. olivieri* females measured 40 mm SVL (TAUM 1731) 3 follicles > 4 mm, early yolk deposition (TAUM 2501) both collected in March. Four smaller females with quiescent ovaries, 35 (September), 38 (December), 38 (January), 39 mm (January) SVL, respectively, were considered juveniles. Mean clutch size (N = 8) was 3.4 ± 0.74, range = 2–4. One female from April with oviductal eggs was undergoing concurrent yolk deposition for a subsequent clutch indicating *M. olivieri* can produce multiple clutches in the same reproductive season in Israel.

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