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COMPARATIVE LONGEVITY OF ISRAELI CHAMAELEONS (REPTILIA: SAURIA: *CHAMAELEO CHAMAELEON* SSPP.)

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Most chamaeleons (*Chamaeleo*) are relatively short-lived in captivity (Flower, 1925; Wagner, 1958; Bustard, 1963; Slavens & Slavens,1993).

In Israel, there are two subspecies of chamaeleons: *Chamaeleo chamaeleon recticrista* (Boettger, 1880) in the Mediterranean (mesic) zone and *Chamaeleo chamaeleon musae* (Steindachner, 1900) in the Negev desert.

Slavens & Slavens (1993) gave two longevity records of *Chamaeleo chamaeleon,* without specifying the subspecies: 3 years 7 months and 3 years 6 months. We traced both of these reports to a single record of Flower (1925:958): 3 years, 6 months and 21 days for an animal from Wadi Natron [Natrun], Egypt. According to Hillenius & Gasperetti (1984), this locality is inhabited by *C. c. chamaeleon.* We found no previous longevity reports of the two Israeli subspecies in captivity.

We checked records of 62 *C. chamaeleon* in the Herpetological Collection at the Hebrew University of Jerusalem, caught during 1968-1991: 52 *C. c. recticrista*; 10 *C. c. musae.* Of these, we used the longevity records only of the 18 specimens for which we had complete data, and which had lived in captivity for over a month. We presumed that those which died within a month of arrival had been brought in bad condition, or were killed for preservation. The chamaeleons were held in the gecko vivarium as described by Werner *et al.* (1993).

The results (Fig. 1) show two maximal records: The longest lived *C. c. recticrista* was a female, captured in Tel-Aviv on 3 May 1979, which lived for 1 year, 5 months and 20 days (HUJR 14335). In contrast, a female *C. c. musae* from the Negev, captured on 3 June 1988, lived for 3 years and 16 days (HUJR 18367).

The mean longevity of *C. c. recticrista* was lower than that of *C. c. musae* and the *t*-test (Table 1) showed that the difference between the two subspecies was significant (even if we exclude two borderline specimens that lived only a little longer than one month).

One of the effects on the chamaeleons' longevity could have been the temperature: animals living in a warmer temperature grow faster and die younger than

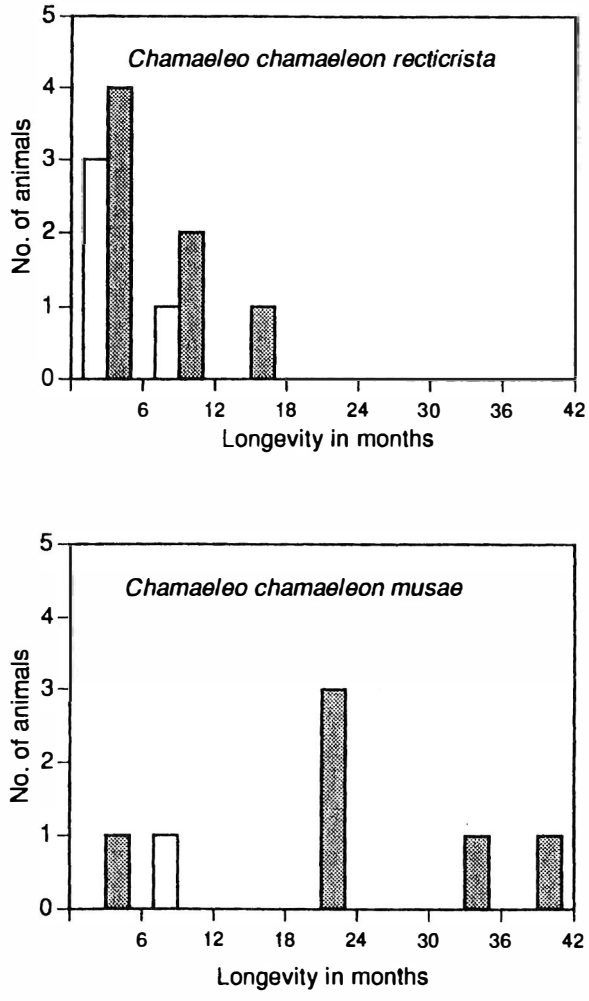

FIG. 1. Longevity in months of *C. c. recticrista* and *C. c. musae*. White: males. Shaded: females

TABLE 1. Statistics of captive longevity in *Chamaeleo chamaeleon* sspp.(with and without the two doubtful specimens). Living time should be read: years.months.days.

	n	mean	Range min	Range max	significance of difference from *musae*
C. c. musae	7	1.7.11	0.2.25	3.0.16	
C. c. recticrista	11	0.5.25	0.1.02	1.5.20	$P<0.01$
C. c. recticrista	9	0.6.25	0.2.0	1.5.20	$P<0.05$

those living in colder conditions (Holcik, 1970). In Israel *C. c. recticrista* lives in a more northern and less warm area than *C. c. musae* (geographical ranges of mean temperature of hottest month, August: 21-27°C, 26-28°C respectively - Atlas of Israel, 1970). Hence the uniform temperature in captivity was relatively higher for *C. c. recticrista* than for *C. c. musae*, possibly causing the difference between the two subspecies, as has been suggested earlier for congeneric gecko species or even conspecific populations (Werner *et al.*, 1993).

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