

## A Note on the Reproduction of the Lizard *Lacerta vivipara* in Hokkaido, Japan

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**Abstract:** A female of *Lacerta vivipara* from Hokkaido laid five baby lizards enclosed in transparent membranes on 8 July 1989. The mean snout-vent length of the hatchlings was 22 mm, and the mean mass was 0.20 g. This was the first confirmation of the viviparity of *L. vivipara* from Hokkaido, Japan.

**Key words:** *Lacerta vivipara*; reproduction; viviparity; Hokkaido; Japan

A female of the lizard *Lacerta vivipara* was captured at Toyotomi-cho, Teshio-gun, Hokkaido (45° 10' N) on 22 June, 1989. She was gravid then, and was 62 mm snout-vent length (SVL) and 4.85 g body mass. Her tail was broken at the time of capture, and the remaining base was 26 mm. She was reared in a terrarium lit intermittently with a lamp and fed with mealworms, crickets and other arthropods.

She laid five baby lizards enclosed in transparent membranes on 8 July 1989. They were found in moistened dead bog moss placed on the floor at 1610 h (Fig. 1). The nose of a baby lizard protruded from the membrane then. Membranes of eggs were stuck together. At 1715 h the heads of four baby lizards and the tail of one baby appeared. The four baby lizards appearing headfirst successfully got out of the membranes by 1745 h (Fig. 1). The one

coming out tail first, failed to slip out of the membrane and died in it.

The mother lizard was 62 mm SVL and 3.89 g just after the laying. Her tail was 43 mm, and the regenerated part was 14 mm. Measurements of the baby lizards are shown in Table 1. The total mass of the hatchlings was 0.99 g, and the total mass of the remaining membranes, yolk sacs, etc. was 0.34 g.

The ratio of average hatchling mass to post-oviposition mother mass was 5.1%, which was lower than in other Japanese oviparous lacertids (6.5–13.3%; Takenaka, 1989). The ratio of total mass of hatchlings to post-oviposition mother was 25.4%, which was average for other Japanese oviparous lacertid lizards (Takenaka, 1989). Neonate size was somewhat larger than that reported for a British population (17–22 mm SVL; Smith, 1973), and clutch size was smaller than those of Britain, where most clutches were six or more (Avery, 1975). The season and manner of this breeding accorded with the normal reproduction of the viviparous populations of *L. vivipara* in France (Panigel, 1956). In Sakhalin, north of Hokkaido, a parturition was observed in August; the clutch size was five, the babies' SVL, 20 mm, and the tail length, 20 mm (Yoshikura, 1938). For these comparisons, of course, more data are needed.

In most of the distribution range, from the Massif Central (France) to Sakhalin, the reproductive mode of *L. vivipara* is viviparous, and oviparous populations have been reported from the Pyrenees and Aquitaine, Spain and France (e.g., Heulin, 1990; Heulin and Guillaume, 1989; Inukai, 1927). This report is

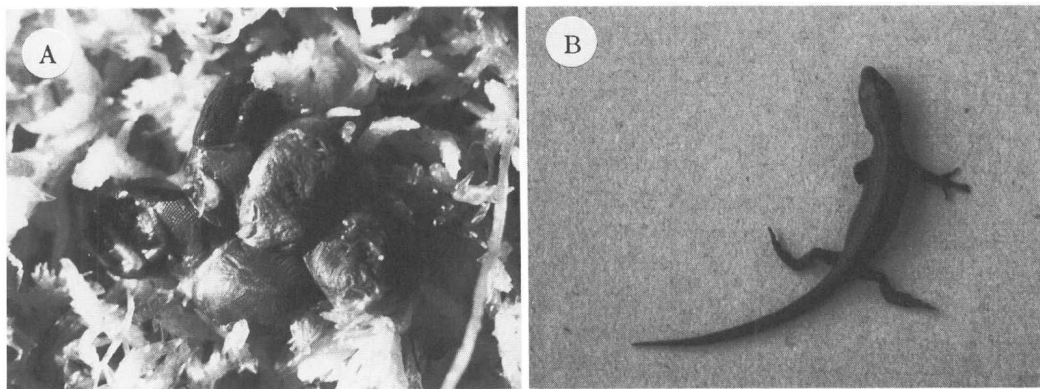


FIG. 1. Baby lizards of *Lacerta vivipara*; (A) lizards enclosed in transparent membranes and (B) a lizard just after getting out of the membrane.

TABLE 1. Body size and mass of *Lacerta vivipara* hatchlings.

Individual number	Condition	SVL (mm)	Tail length (mm)	Body mass (g)
1	live	21	22	0.190
2	live	21	21	0.166
3	live	23	23	0.213
4	live	22	22	0.187
5	dead	22	22	0.236

the first confirmation of viviparity of Japanese *L. vivipara* since the species was found in the northern part of Hokkaido in 1961 (Inukai et al., 1972). The range of viviparous populations should be revised to a wider one.

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## 要旨 北海道産コモチカナヘビの生殖の記録

竹中 踐

北海道のコモチカナヘビの胎生が確認された。1989年6月22日に北海道・豊富町において捕獲されたコモチカナヘビの雌が、飼育下で同年7月8日に5個体の仔を産んだ。透明な膜につつまれて産み落とされた仔は、その日の内に膜か

ら脱出した。仔の平均体長は 22 mm, 平均体重は 0.20 g であった。

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