

**Captive Breeding of the Alpine Newt,
Ichthyosaura alpestris (Laurenti, 1768) (Amphibia, Caudata, Salamndridae)
Under Hormonal Stimulation**

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Received 9 March 2018, revised 12 June 2018, accepted 15 September 2018

The Alpine newt, *Ichthyosaura alpestris*, is widely distributed in Central Europe. This species is common for most part of its habitat. *I. alpestris* is rare in Ukraine, Hungary, Bulgaria, Austria and Denmark. In the Netherlands, Belgium and Luxembourg the Alpine newt is endangered. A large number of publications on the keeping and breeding of this species in captivity is known. This allows the Alpine newt to be saved in artificial conditions, as well as to carry out projects on its reintroduction. Current methods of the amphibian's reproduction intensification are becoming more and more widespread in our zooculture. Hormonal stimulation of reproductive behavior, fertilization and oviposition is one of such methods. A synthetic analogue of the gonadotropic hypothalamic neurohormone luteinizing hormone-releasing hormone (surfagon) is most commonly used in Russia. Injections of this hormonal drug have allowed obtaining offspring from many amphibian species. This paper presents the results of captive breeding of the Alpine newt using surfagon. Newts were captured in the Ivano-Frankovsk region of the Ukraine. Subsequently, they were kept in pairs in plastic water-filled containers. The animals were fed with larval chironomids (bloodworms). Live Java moss, *Vesicularia dubyana*, was placed into the containers with the newts. Hormonal stimulation of reproduction was performed after 10 months of the animals keeping. Surfagon solution (12.5 mg of the active ingredient per newt) was injected into the abdominal cavity once in early February. The females began to lay off eggs 1–3 days after the injection. Egg laying cases were observed at water temperatures between 5.0 and 22.5°C. The total period of oviposition (from the first egg found to the last one) was 44–92 days. In total, the females laid 141 to 268 eggs during this period. All five females laid eggs in February and March, four ones did in April, and only three ones did in May. The egg length was 3.0–4.5 mm and the width was 2.0–3.9 mm. Pre-larvae emerged from the eggs in 8–13 days. The total length of a pre-larva was 7.8–11.4 mm. The larvae were fed with live nauplius of artemia, *Artemia salina*, and with bloodworms later. Young newts started to come on land in 88–96 days. Some larvae underwent no metamorphosis even after 10 months of their development. The total body length (with tail) of the young newts was 27.3–43.2 mm, and their weight was 0.13–0.45 g. The authors note that the use of one surfagon injection allowed getting eggs from Alpine newts just since early February, i.e. significantly earlier than the natural reproduction term. Subsequently, viable young newts were grown from these eggs. This allows us to recommend the use of hormonal stimulation to accelerate reproduction of the Alpine newt in artificial conditions.

Key words: tailed amphibians, zooculture, methods of breeding, surfagon.

DOI: <https://doi.org/10.18500/1814-6090-2019-19-1-2-31-39>

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Cite this article as:

Kidov A. A., Nemyko E. A. Captive Breeding of the Alpine Newt, *Ichthyosaura alpestris* (Laurenti, 1768) (Amphibia, Caudata, Salamndridae) Under Hormonal Stimulation. *Current Studies in Herpetology*, 2019, vol. 19, iss. 1–2, pp. 31–39 (in Russian). DOI: <https://doi.org/10.18500/1814-6090-2019-19-1-2-31-39>
