

On a record of largest specimen of *Triturus dobrogicus* (Kiritzescu 1903) from the Danube Delta, Romania

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Abstract. The largest size known for the nominate subspecies *T. d. dobrogicus* is 152mm in a female from Romania, most probably from the Danube Delta. In our paper we present a record female of *Triturus dobrogicus* from Danube Delta. This female has a total length of 175.5 mm, 7.01% longer than the previous record literature data for *Triturus dobrogicus macrosoma* and 15.46% longer than the previous record literature data for *Triturus dobrogicus dobrogicus*.

Key words: *Triturus dobrogicus*, largest specimen, Danube Delta, Romania.

The Danube Crested Newt, *Triturus dobrogicus* (Kiritzescu 1903) is a polytypic species with two subspecies (Litvinchuk & Borkin 2000), the Pannonian Crested Newt, *Triturus dobrogicus macrosoma* (Boulenger 1908), spread in the Pannonic Basin of the Danube above the Iron Gates, and the Danube Crested Newt, *Triturus dobrogicus dobrogicus* (Kiritzescu 1903) along the Danube floodplain below the Iron Gates to the outflow to the Black Sea in the Danube Delta, extending along tributaries of the Danube (Siret, Prut) and along the littoral lagoons to the Dnepr river delta and to south to Durankulak Lake (Fuhn 1960, Arntzen et al. 1997, Cogalniceanu et al. 2000, Litvinchuk & Borkin 2000, Litvinchuk 2005, Iftime 2005, Covaciu-Marcov et al. 2006, Strugariu & Gherghel 2008, Gherghel & Iftime 2009, I. Gherghel - unpublished data).

The Danube Crested Newt is a member of the large size newts group also known as „*Triturus cristatus* superspecies” to which also belong *Triturus carnifex* (Laurenti, 1768), *Triturus macedonicus* (Karaman 1922), *Triturus cristatus* (Laurenti, 1768), *Triturus karelinii* (Strauch 1870) and *Triturus dobrogicus* (Kiritzescu 1903) (Arntzen et al. 2007).

Triturus carnifex is considered the largest newt in the *cristatus* group, a female specimen, collected in Italy and raised in captivity some years, reaching a total length of 209 mm when it was euthanized (Lanza & Campolmi 1991). Other record dimensions in this group of newts are 180 mm for *Triturus cristatus*, likewise in a female (Mertens 1952), and 160 mm for *Triturus karelinii* (Buresch & Zonkov 1941), a species that reaches somewhat smaller dimensions. However, specimens from hybridogenic origins can grow to 270 mm in length

(the case of a specimen of *Triturus cristatus* X *Triturus carnifex* from Germany) (Umlandt 1985). Another record specimen from a hybridogenic origin was a female of 221 mm of *Triturus dobrogicus* X *Triturus karelinii* from Belgard (Kalezic et al. 1997).

In the *cristatus* group, *Triturus dobrogicus* is one of the smallest in total length, the maximal size recorded being 164 mm in a female from Budapest (Fuhn & Freytag 1961) therefore a specimen belonging to the subspecies *T. d. macrosoma*, known for a larger size and a more robust habitus as compared to the nominate subspecies (Litvinchuk & Borkin 2000 - see table 1). The largest size known for the nominate subspecies *T. d. dobrogicus* is 152 mm (Fuhn 1960) in a female from Romania, most probably from the Danube Delta.

In the summer of 2007, investigating the herpetological collection of the „Grigore Antipa” National Museum of Natural History, in the I. E. Fuhn collection we noticed a *Triturus dobrogicus* female showing unusual biometric features, i.e. an unusually great total length. This specimen, MGAB 2757, was collected by I.E. Fuhn at Caraorman, Danube Delta, Romania.

For measurements we used a caliper with 0.01 mm error margin and for comparison with other species we resorted to discriminative statistics. The geographical location and other morphological and biometric features ascertain that the specimen belongs to the nominate subspecies, *Triturus dobrogicus dobrogicus*.

This female has a total length of 175.5 mm, 7.01% (10.5 mm) longer than the previous record literature data for *Triturus dobrogicus macrosoma* and 15.46% (23.5 mm) longer than the previous record literature data for *Triturus dobrogicus dobrogicus* (Table 1).

Table 1. Maximum size in both sexes and subspecies of *Triturus dobrogicus*, compared to MGAB 2757.

<i>Triturus dobrogicus</i> subspecies	Country	Sex		Maximum (mm)			Reference
		Male	Female	SVL	Tail	Total length	
<i>dobrogicus</i>	Romania	x		76	56	132	Fuhn 1960
<i>dobrogicus</i>	Romania		x	82	70	152	Fuhn 1960
<i>macrosoma</i>	Vienna, Austria	x		?	?	140	Lanza & Campolmi, 1991
<i>macrosoma</i>	Budapest, Hungary		x	?	?	164	Fuhn & Freytag, 1961
<i>dobrogicus</i>	Danube Delta, Romania		x	94	81.5	175.5	MGAB 2757 - our data

The present record of this maximum size specimen of *Triturus dobrogicus* can be explained through the reduced anthropogenic disturbance of the Danube Delta (and particularly of Caraorman, a long-established protected area) as compared with other parts of the Romanian range of this species, thus, in an optimal habitat, the species attaining such large size. The rich trophic offer of the collecting location may contribute in the attaining of very large size in such newts, which is corroborated by the data regarding specimens raised in captivity on an abundant and diverse diet and also reaching very large sizes, such as in the case of the *Triturus carnifex* female in Florence (Lanza & Campolmi 1991).

Our record thus contributes to the knowledge of the morphology and ecology of this species, which is a protected species, having undergone a severe decline (see Iftime, 2005); such large specimens occurring in the wild may indicate optimal habitat conditions, important for establishing a favourable status of conservation.

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