

Der Brennerpass in den Ostalpen, Einfallstor und Grenzscheide für die postglaziale Herpetofauna

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The Brenner-pass in the Eastern Alps, gateway and border wall for the postglacial herpetofauna

The Brenner pass (elevation 1370 m a. s. l.), today boundary between Austria (Bundesland Tyrol) and Italy (Autonome Provinz Bozen-Südtirol/Alto Adige), is the lowest and historically most important pass in the eastern Alps. The immediate surroundings of the pass (»Brennerfurche«) are presently inhabited by upper montane – subalpine amphibian- and reptile associations according to our own investigations, i.e. *Triturus alpestris*, *Bufo bufo*, *Rana temporaria*, *Zootoca vivipara*, *Vipera berus*. The presence of *Anguis fragilis*, contrary to *Coronella austriaca*, should be expected here. *Salamandra atra* may be present likewise, especially where calcarious formations are turning up. All of these species are not being dependant on valleys as dispersion paths, because of their ecological tolerances. *Podarcis muralis*, the distribution of which is ending immediately south of the »Brennerfurche«, has apparently surmounted the pass during one of the postglacial warm periods, and inhabits presently a large isolated territory in the Inn valley. There is a similar situation in the southern *Natrix natrix helvetica*, presently forming transition stages with the central European *N. n. natrix* in the northern Tyrolian Inn valley. It remains doubtful, if there happened at any time a comparable dispersion over the Brenner pass by *Lacerta bilineata* or *Lacerta agilis* from the south or north respectively. *Salamandra s. salamandra* and *Bombina v. variegata* have reached the foothills of the central alpine ridge from both sides, but probably did not cross the pass. In this context the more or less diminutive and isolated distributions of *Bufo viridis*, *Rana dalmatina* and *Zamenis longissimus* within the northern Tyrolian Inn valley are of a remarkable interest. In both the northern Inn valley (and its tributary Sill) and in the southern Eisack valley (north of Bozen/Bolzano) the stepwise ending of the planar-colline or submediterranean herpetofauna, towards the Brenner pass, is identifiable. In the south, between the submediterranean surroundings of Brixen/Bressanone (the striking borderlines of viticulture and *Castanea sativa*) and Sterzing/Vipiteno the distributions of a series of species, here existing only south of the Central Alpine ridge (especially *Hyla intermedia*, *Lacerta bilineata*, *Natrix tessellata*, *Hierophis viridiflavus*, *Vipera aspis*) are ending. There may be expected further information on the postglacial dispersion into the Alps by examination of the mitochondrial DNA of different taxa having revealed surprising results in *Lacerta agilis*, *Podarcis muralis*, *Zootoca vivipara*, and *Vipera berus* up today. Especially the warm-adapted amphibians with their linear distributions are extremely threatened in our day due to the intensive cultivations in the alpine valleys. There are, however, missing more recent, comprehensive publications in South Tyrol – unlike most of the other alpine regions in Italy. We are therefore depending on his-