Main results of a study on the genetics of *Arianta*-populations

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12 samples (=populations) of *Arianta arbustorum* (ingroup), 2 samples of *Arianta chamaeleon* (outgroup) and 1 sample of *Arianta schmidti*, each consisting of 25-30 individuals, were analysed by allozyme-electrophoresis. Additionally, morphological variation of this 15 plus additional 3 populations was recorded. In total, 510 individuals were characterized according to their electromorphs at 15 enzymatic loci and to 8 shell traits. The main results are

- All populations are highly polymorphic (P= 53.3 - 100%).
- The species *A. arbustorum, A. chamaeleon* and *A. schmidti* are clearly distinguishable, both shell-morphologically and genetically.
- According to the enzyme systems analysed, no distinction can be made genetically between the different morphs (globular shells, not umbilicated - flat shells, open umbilicus) of *A. arbustorum.*
- In *A. arbustorum* in most cases genetic distances between populations of one mountain stock are greater than between populations of different mountain stocks.

Populations

Nr.	Code	Locality	Altitude	Nr.	Code	Locality	Altitude
Arianta arbustorum							
1	AEN	Styria, Gesäuse, Kummerbrücke	540m	**11**	ASE	Upper Austria, Sengsengebirge, Haltersitz	1500m
2	AEX	England, Huntingdon	100m	**12**	AWA	Styria, Gesäuse, Wasserfallweg	900m
3	AGE	Styria, Gesäuse, Hesshütte	1600m	**13**	AWE	Upper Austria, Totes Gebirge, Welser Hütte	1700m
4	AHA	Upper Austria, Sengsengebirge, Hagler	1550m	**14**	AWO	Carinthia, Karnische Alpen, Wolayer See	1900m
5	AJO	Styria, Gesäuse, Johnsbach	870m	**15**	AZI	Styria, Gesäuse	1600m
6	AKA	Styria, Gesäuse, Haindlkar	1100m	***Arianta chamaeleon***			
7	AKL	Lower Austria, Klosterneuburger Au	300m	**16**	CBA	Carinthia, Karawanken, Bärental	1300m
8	ALA	Styria, Totes Gebirge, Lawinenstein	1700m	**17**	CWO	Carinthia, Karnische Alpen, Wolayer See	1900m
9	APE	Styria, Gesäuse, Peternpfad	1780m	***Arianta schmidti***			
10	APL	Upper Austria, Linz, Pleschinger Au	300m	**18**	SST	Slowenia, Steiner Alpen, Kamnisko sedlo	1900m

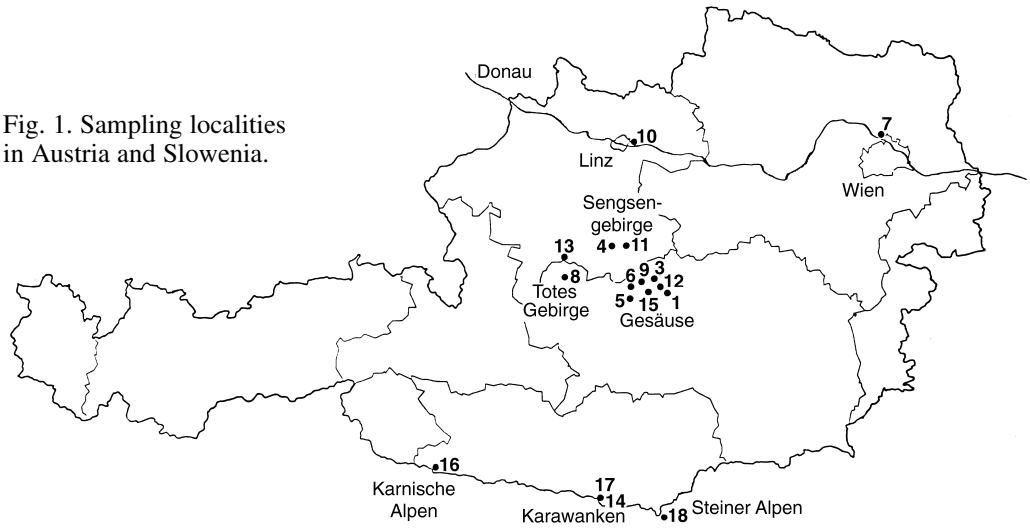

Fig. 1. Sampling localities in Austria and Slowenia.