

On the occurrence of a species of *Xeropicta* in France

by

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Some time ago Mr. D. ATEN sent me some specimens of a *Helicella* collected in two localities in the Département des Bouches-du-Rhône by Mr. J. G. J. KUIPER. Mr. ATEN had found that these specimens belonged to the subgenus *Xeropicta*. No species of this subgenus is recorded from France by GERMAIN in the Faune de France, and Mr. ATEN failed to identify the species using the literature at his disposal.

The specimens reminded me of a French *Helicella* which I had identified some years earlier as *Helicella (Helicopsis) arenosa* (Ziegler) on the authority of a paper by CHERBONNIER (1953). These specimens had been found at Tholonet, also in the Dép. des Bouches-du-Rhône, and CHERBONNIER recorded *H. arenosa* from the same locality as a species new to the French fauna. On re-examination it appeared that the specimens sent by Mr. ATEN and those earlier received from Tholonet belonged to the same species as CHERBONNIER had identified with *H. arenosa*, but that Mr. ATEN was right in placing the species in *Xeropicta*. Consequently CHERBONNIER's identification was wrong.

The character distinguishing *Xeropicta* from *Helicopsis*, the possession of an appendicula penis, clearly appears in CHERBONNIER's figure of the reproductive organs of what he calls *H. arenosa*, and is mentioned in his text as a "gros diverticule" of the penis.

Among the unidentified material of *Helicella* in our museum I found a sample from Novi Vinodol in Jugoslavia which evidently belongs to the same species of *Xeropicta*. Therefore I consulted the publication by STURANY & WAGNER on the land Mollusca of Albania and the neighbouring countries, and found that the shell as well as the genitalia agree with the species they call *Helicella gyroides* (Pf.). The original description (1870, p. 143) of *Helix gyroides*, and the figures PFEIFFER (1870-1876, pl. 117 fig. 16-18) himself gave of this species seemed, however, to represent another species. Dr. ZILCH was so kind as to inform me that the three syntypes of PFEIFFER's species were destroyed in Stettin during the war. The Senckenberg Museum possesses, however, among several lots of this species, three specimens which belonged to PARREYSS, who procured the original series of the species, and Dr. ZILCH kindly sent me these specimens

on loan. They appeared to agree very well with PFEIFFER's description and figures, but they differ from the species here discussed in the same respects as PFEIFFER's description and figures differ from the description of the shell of *Helicella gyroides* by STURANY & WAGNER. Therefore I concluded that *Helicella (Xeropicta) gyroides* Sturany & Wagner, *non* Pfeiffer occurs in southern France.

Meanwhile I had sent some of the specimens from Novi Vinodol to Dr. LIKHAREV in Leningrad for comparison with specimens in the Zoological Institute of the U. S. S. R. Academy of Sciences, because several species of *Xeropicta* happen to be inhabitants of that country. In LIKHAREV's opinion the species from Novi Vinodol is a white form of *Helicella (Xeropicta) derbentina* (Kryn.), of which species LIKHAREV was so kind as to send me two white specimens for comparison. Mr. ATEN told me that Dr. FORCART of Basel, to whom he had sent some of the French specimens, held the same opinion.

HESSE (1934, p. 28), studied the anatomy of a number of species of *Xeropicta*, and came to the conclusion that two groups of species can be distinguished: those with a long (4-6 mm) flagellum penis, and those with a short (less than 2 mm) flagellum. For the rest the species are to be distinguished on conchological characters. Our material from France and Novi Vinodol belongs to the group with a short flagellum.

In this group HESSE places two species: *derbentina* and *gyroides*. Under *H. gyroides* Hesse cites the paper by STURANY & WAGNER, but he also examined the species personally, his material having been procured by BRUSINA. It appears that BRUSINA, after having at first mixed up *Helicella gyroides* with some other Dalmatian species closely resembling it, afterwards keenly distinguished it from these species and knew exactly what PFEIFFER's species was like (BRUSINA, 1885). Therefore it seems probable that HESSE dissected the genuine *H. gyroides*, although this point needs confirmation. Consequently up to now the reproductive organs of two or three species of *Xeropicta* with a short flagellum have been studied.

Of these *H. gyroides* has already proved not to be the species found in southern France, and, in spite of the opinion of FORCART and LIKHAREV I hesitate to identify our material with *H. derbentina*. In fact the published figures of the latter species, as well as the specimens so kindly procured by LIKHAREV, show that *H. derbentina* has: (1) a flatter shell, (2) a smaller number of whorls when the dimensions are the same, and (3) always some traces left of the colour pattern which is well-developed in the typical form of this species.

Among the species from Dalmatia likely to be confounded with *H. gyroides* BRUSINA (1885) deals with "*H. homoleuca* Sandri & Kutschig, 1846". He gives no complete description, but the characters by which he states that this species should be distinguished from *H. gyroides*, and the description of the species in WESTERLUND's "Fauna der in der paläarktischen Region lebenden Binnenconchylien" (1889, p. 274) agree very well with the species found in southern France.

It was Dr. ZILCH again who provided me with three samples of this species. The first appeared to be from the original series of *H. gyroides* of STURANY & WAGNER, the specimens were, however, labelled *H. homoleuca* in A. J. WAGNER's handwriting. The other samples are from PARREYSS and from BRUSINA. After comparison I am convinced that the specimens from southern France as well as those from Novi Vinodol belong to *H. homoleuca*. The material from the Senckenberg Museum shows this to be a variable form as to the height of the shell and the number of whorls found in shells of given dimensions. In large flat specimens the number of whorls is not or hardly larger, and they approach *H. derbentina* very nearly, the only difference being that no traces of a colour pattern are visible in the shells from Jugoslavia and France. As no anatomical differences could be found, I prefer to consider *H. homoleuca* a geographical subspecies of *H. derbentina* distinguished from the typical subspecies by a tendency to have smaller and higher shells and by the absence of traces of the dark colour pattern ¹⁾.

The name *homoleuca* was attributed to SANDRI & KUTSCHIG by BRUSINA. I have not been able to consult SANDRI & KUTSCHIG's paper myself, but from BRUSINA's (1870, p. 7) remark "SANDRI et KUČIK, qui ne firent que publier des noms sans jamais rien décrire" it appears that they published nomina nuda. BELLOTTI, 1854, and KUTSCHIG, 1866, both cited by BRUSINA (1885, p. 20) also mentioned the name *homoleuca* without giving any description. Therefore the name *homoleuca* was not validated before 1870 when BRUSINA (p. 27) pointed out the differences between "*Xerophila homoleuca* Sabljar (an Parr.?)" from three localities in Croatia and "*Xerophila obvia* E. A. Bielz (an Hart?)". I propose, therefore, to call the form from Croatia and southern France: *Helicella (Xeropicta) derbentina homoleuca* (Brusina, 1870). The specimens from southern France are high

¹⁾ Mr. Aten drew my attention to small spots sometimes visible on the underside of young shells from the French localities. In white specimens of *derbentina derbentina*, however, such traces of the colour pattern occur on the upper side of adult shells.

and small without exception, and have slightly thicker shells than those from Jugoslavia. The following are some measurements of shells which I examined.

locality	Height	Diameter	Whorls
Damach, Lenkoran (from Zoological Institute, Leningrad)	8	14	4 $\frac{7}{8}$
	9	14	4 $\frac{3}{4}$
Novi Vinodol, Jugoslavia	8 $\frac{1}{2}$	13 $\frac{1}{2}$	5 $\frac{1}{8}$
	8	13 $\frac{1}{2}$	5
	8	12 $\frac{1}{2}$	5 $\frac{1}{4}$
Carlopageo, Jugoslavia (from Senckenberg Museum)	7 $\frac{1}{2}$	13	5 $\frac{1}{4}$
	8	12 $\frac{1}{2}$	5 $\frac{1}{2}$
	7	12	5 $\frac{1}{4}$
Kapela, Jugoslavia (from Senckenberg Museum)	8	16	5 $\frac{1}{2}$
	8 $\frac{1}{2}$	15	5 $\frac{1}{4}$
	8	13 $\frac{1}{2}$	5 $\frac{1}{2}$
Obrovac, Jugoslavia (from Senckenberg Museum)	9 $\frac{1}{2}$	16 $\frac{1}{2}$	5 $\frac{1}{2}$
	8	14	4 $\frac{7}{8}$
Rousset, Bouches du Rhône, France	9 $\frac{1}{2}$	13 $\frac{1}{2}$	5 $\frac{7}{8}$
	8 $\frac{1}{2}$	13 $\frac{1}{2}$	5 $\frac{3}{8}$
	8	12	5 $\frac{3}{8}$

The occurrence of *Helicella derbentina homoleuca* in France is remarkable. It was discovered at Tholonet, 4 km E of Aix-en-Provence, by J. TIMON-DAVID in October 1952, but specimens from that same locality which our museum received from Dr. F. E. LOOSJES had been collected by Mr. G. VAN ROSSEM already in June 1949. In May 1958 Mr. KUIPER found it at Rousset (17 km ESE of Aix), and le Luc (60 km E of Rousset). In the former locality it was so abundant that some meadows seemed covered by white flowers. In fact Mr. KUIPER discovered the snails because his wife had asked him to stop a moment so that she could gather a bunch of these flowers!

From a zoogeographical point of view it seems likely for two reasons that the species was introduced into France. In the first place because it is difficult to account for the discontinuous range of the species in any other way, and in the second place because the subgenus *Xeropicta* essentially has an eastern-mediterranean distributional area comprising Cyrenaica, Egypt, Palestine, Syria, Asia Minor, Persia, Turkestan, SE Russia, and the northern part of the Balkan peninsula. The occurrences of *H. gyroides* and *H. derbentina homoleuca* in Croatia, and of the latter also in Istria, are the most western outposts of this area.

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SAMENVATTING

In mei 1958 verzamelde J. G. J. KUIPER op twee vindplaatsen in het département des Bouches du Rhône een *Helicella*-soort, waarvan Mr. D. ATEN constateerde dat zij tot het ondergeslacht *Xeropicta* behoorde. Van deze groep was nog geen soort uit Frankrijk bekend, maar de onderhavige soort bleek in 1953 door CHERBONNIER, ten onrechte als *H. (Helicopsis) arenosa* (Ziegler), van een andere vindplaats in hetzelfde departement gemeld te zijn. Vastgesteld kon worden, dat de Franse vorm identiek is met de Croatische *H. homoleuca* (Brusina), die te beschouwen is als een geographische ondersoort van *H. derbentina* (Kryn.). Het lijkt waarschijnlijk dat *H. derbentina homoleuca* (Brusina) niet tot de natuurlijke fauna van Zuid-Frankrijk behoort.