



First records in Italy of the red-listed shore bug *Salda henschii* (Reuter, 1891) (Hemiptera: Heteroptera: Saldidae)

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Salda henschii (Reuter, 1891) is a boreo-montane species of Saldidae (Hemiptera: Heteroptera) restricted to mountain bogs and streams in central Europe (e.g., Western Carpathians, Alps) and to freshwater wetlands in lowland coastal areas in northern Europe (Fennoscandia); it is a vicariant of the arctic (Holarctic) element *S. sahlbergi* Reuter, 1875 (Hoberlandt 1977; Schuh *et al.* 1987; Péricart 1990; Lindskog 1991; Vinokurov 2010).

The southernmost records of *S. henschii* were hitherto those from the Alps in Switzerland, Liechtenstein, and Austria (Lindskog 1995). The species has been included in several red lists (e.g., Štepanovičová & Bianchi 2001; Bartels *et al.* 2004; Kment & Vilímová 2006; Friess & Rabitsch 2015).



FIGURE 1. *Salda henschii* (Reuter, 1891), male from the Italian Maritime Alps: a) habitus; scale bar = 1 mm; b) pygophore, with parandria in posterior view, c) left paramere, and d) right paramere; scale bar 200 μ m. Photos taken with Leica M205 C stereomicroscope.

Material examined: ITALY: Piedmont: Valdieri (Cuneo), Pian del Valasco, peat bog, ab. 1775 m a.s.l., 44.196° N 7.230° E (WGS84), 27.VII.2012, M. Norbiato legit, 1 ♂ macropterous (Fig. 1) (Entomological Collection of the Natural History Museum of the University of Florence - Zoological Section “La Specola”—MZUF; Florence, Italy); Valdieri (Cuneo), Gias della Casa, small pools in a peat bog near Torrente Gesso della Valletta (stream), ab. 1675 m a.s.l., 44.174 N 7.267 E (WGS84), 28.VII.2015, F. Cianferoni legit, 5 ♂, 7 ♀ macropterous (Collection F. Cianferoni; Florence, Italy); *idem*, S. Rocchi legit, 1 ♀ macropterous (Collection F. Cianferoni; Florence, Italy).

Discussion: The discovery of *Salda henschii* in the Maritime Alps is remarkable and unexpected. The only congener occurring in the Western Alps is *S. littoralis* (Linnaeus, 1758), another boreo-montane element widespread on the Alpine arc; it is recorded both on the Italian and French sides of the Alps, but surprisingly never in the Maritime Alps (Péricart 1990: “Italie: seulement dans l’arc alpin, mais non dans les Alpes Maritimes”; Faraci & Rizzotti Vlach 1992; Carapezza & Faraci 2007). In fact, *S. littoralis* was also not detected during our research in the Maritime Alps.

The new records of *S. henschii* extend the known range of the species approximately 250 km southwards, and they represent the first records for Italy. All these records come from sites located in overlapping protected areas: the natural park “Parco Naturale delle Alpi Marittime”, the Site of Community Importance (SCI), and the Special Protection Area (SPA) “Alpi Marittime” (IT1160056). *Salda henschii* has not been recorded from France, and should be searched for on the French side of the Maritime Alps, which is included in Mercantour National Park.

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References

- Bartels, R., Gruschwitz, W. & Kleinstaub, W. (2004) Rote Liste der Wanzen (Heteroptera) des Landes Sachsen-Anhalt. *Berichte des Landesamtes für Umweltschutz Sachsen-Anhalt*, 39, 237–248. [in German]
- Carapezza, A. & Faraci, F. (2007) Insecta Heteroptera Leptopodidae, Saldidae, Miridae (partim), Tingidae. In: Ruffo, S. & Stoch, F. (Eds.), Checklist and Distribution of the Italian Fauna. *Memorie del Museo Civico di Storia Naturale di Verona*, 2ª Serie, Sezione Scienze della Vita, 17 (2006), 151–153, CD-ROM.
- Faraci, F. & Rizzotti Vlach, M. (1992) I Leptopodomorpha italiani. Catalogo topografico con considerazioni ecologiche, fenologiche e zoogeografiche (Heteroptera). *Memorie della Società entomologica italiana*, 70 (2), 33–102. [1991]
- Friess, T. & Rabitsch, W. (2015) Checkliste und Rote Liste der Wanzen der Steiermark (Insecta: Heteroptera). *Mitteilungen des Naturwissenschaftlichen Vereines für Steiermark*, 144, 15–90. [in German]
- Hoberlandt, L. (1977) Distributional data on Saldidae (Heteroptera) in Czechoslovakia with a taxonomic note on *Salda sahlbergi* Reuter and *Salda henschi* (Reuter). *Acta Entomologica Musei Nationalis Pragae*, 39, 139–158.
- Kment, P. & Vilimová, J. (2006) Heteroptera (ploštice). In: Farkač, J., Král, D. & Škorpík, M. (Eds.), *Červený seznam ohrožených druhů České republiky Bezobratlí. Red list of threatened species in the Czech Republic. Invertebrates*. Agentura ochrany přírody a krajiny ČR, Praha, pp. 139–146. [2005, in Czech and English]
- Lindskog, P. (1991) Taxonomy and distribution of the boreomontane shore bugs *Salda sahlbergi* and *S. henschii* (Heteroptera, Saldidae). *Entomologisk tidskrift*, 112, 1–18.
- Lindskog, P. (1995) Infraorder Leptopodomorpha. In: Aukema, B. & Rieger, C. (Eds.), *Catalogue of the Heteroptera of the Palaearctic Region. Vol. 1. Enicocephalomorpha, Dipsocoromorpha, Nepomorpha, Gerromorpha and Leptopodomorpha*. The Netherlands Entomological Society, Wageningen, pp. 115–141.
- Péricart, J. (1990) Hemiptères Saldidae et Leptopodidae d’Europe occidentale et du Maghreb. *Faune de France*, 77 (Fédération française des Sociétés de Sciences naturelles), Paris, 238 pp.
- Schuh, R.T., Galil, B. & Polhemus, J.T. (1987) Catalog and bibliography of Leptopodomorpha (Heteroptera). *Bulletin of the American Museum of Natural History*, 185, 243–406.
- Štepanovičová, O. & Bianchi, Z. (2001) Červený (Ekosozologický) zoznam bzdôch (Heteroptera) Slovenska. Red (Ecosozological) List of Heteroptera of Slovakia. In: Baláž, D., Marhold, K. & Urban, P. (Eds.), *Červený zoznam rastlín a živočíchov Slovenska (Red list of plants and animals of Slovakia)*. *Ochrana prírody*, 20 (Supplement), pp. 105–106. [in Slovak]
- Vinokurov, N.N. (2010) Species of the genus *Salda* F. (Heteroptera, Saldidae) of the fauna of Russia and adjacent territories. *Entomological Review*, 90 (6), 727–740.
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