ISSN 1211-8788 *Acta Musei Moraviae, Scientiae biologicae* (Brno)
94: 43–55, 2009

The distribution of *Pinthaeus sanguinipes* in the Czech Republic and Slovakia (Hemiptera: Heteroptera: Pentatomidae)

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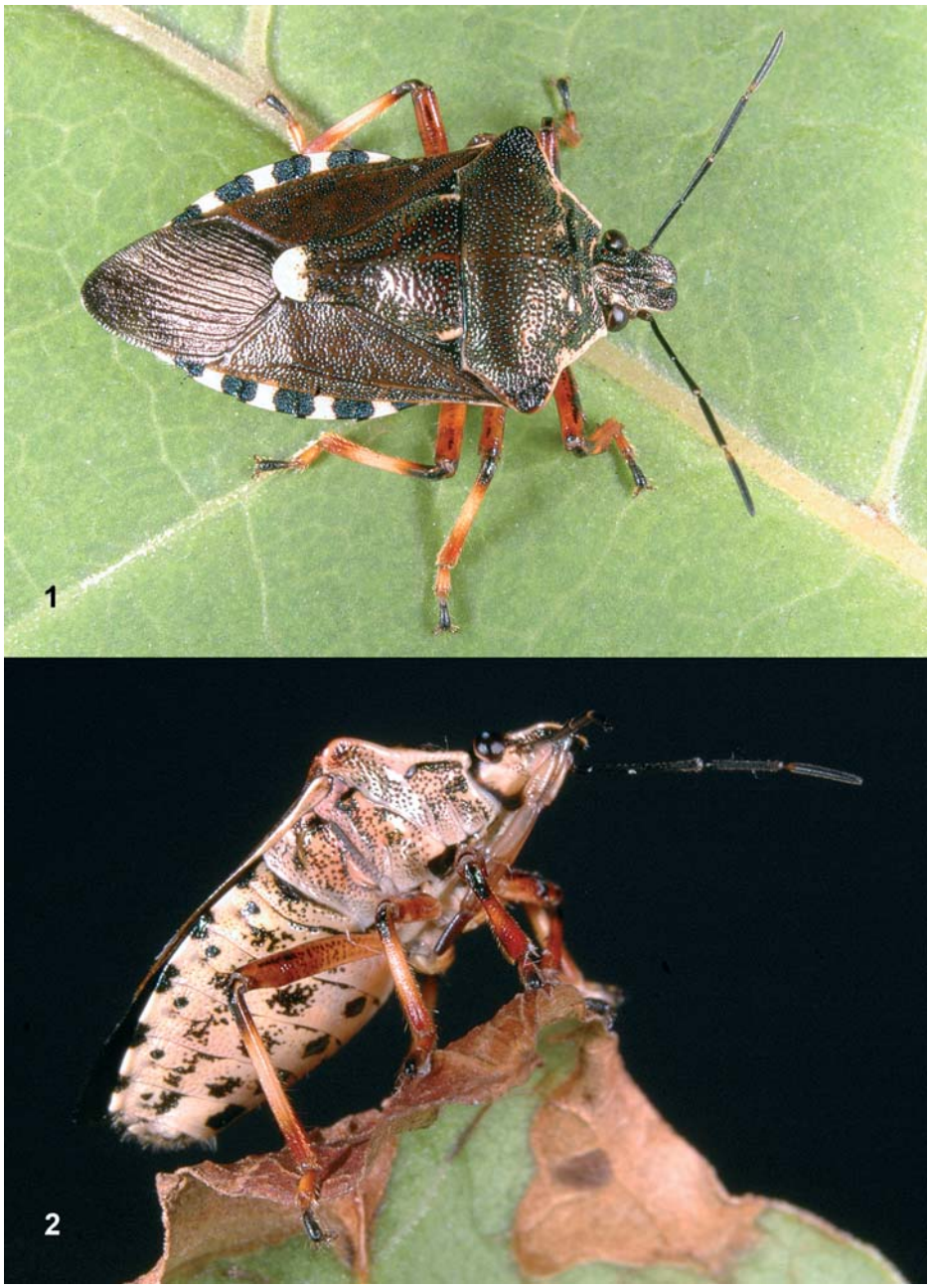
Kment P., Hradil K. & Jindra Z. 2009: The distribution of *Pinthaeus sanguinipes* in the Czech Republic and Slovakia (Hemiptera: Heteroptera: Pentatomidae). *Acta Musei Moraviae, Scientiae biologicae* (Brno) **94:** 43–55. – All available published and unpublished distributional records of *Pinthaeus sanguinipes* (Fabricius, 1781) in the Czech Republic and Slovakia are summarized, mapped and discussed. The distribution of this species in the Czech Republic (both Bohemia and Moravia) is disparate, with records pooled to three periods (*c*. 1890–1903, 1936–1952, and 1993 – present). The pattern for Slovakia is less clear, with several records before 1897 and only seven scattered records between 1947 and 1992.

Keywords. Pentatomidae, Asopinae, *Pinthaeus*, distribution, Bohemia, Moravia, Czech Republic, Slovakia

Introduction

The genus *Pinthaeus* Stål, 1868, including only two Palaearctic species, belongs to the Asopinae, a subfamily of predaceous shield bugs. While *Pinthaeus humeralis* Horváth, 1911 is restricted to China and Japan, the second species, *P. sanguinipes* (Fabricius, 1781) (Figs 1–2), is widely distributed in the deciduous forest zone of the northern Palaearctic. To date, *P. sanguinipes* has been recorded from the following countries: Austria, Belgium, Bosnia Herzegovina, Bulgaria, Croatia, the Czech Republic, Denmark, France, Germany, Greece, Hungary, Italy, Macedonia, Moldavia, Poland, Portugal, Romania, Russia (Central and South European Territories), Slovakia, Slovenia, Spain, Switzerland, Ukraine; Azerbaijan, China (North-eastern Territory), Georgia, Iran, Israel, Japan, Korea, Syria, and Turkey (Rider 2006; Lodos & Önder 1983, Protić 2008). Despite this large distribution area, the species appears nowhere abundant and is known only from single records (e.g. Putshkov 1961, Rieger 2000, Wachmann *et al.* 2008). The same is also true of the occurrence of *P. sanguinipes* in the Czech Republic. For this reason we summarize all published as well as unpublished Czech and Slovak records in this paper and discuss the peculiar distribution patterns of this shield bug.



Figs 1–2. Adult specimen of *Pinthaeus sanguinipes* (Fabricius, 1781) (Kladruby u Vlašimy, 5.ix.2008). Photo: L. Hanel.

The biology and ecology of *Pinthaeus sanguinipes* have been addressed in valuable contributions by Putshkov (1961), Stehlík (1987)[1)], and Rieger (2000). It is an univoltine species overwintering in the adult stage (Putshkov 1961; Štepanovičová & Kovačovský 1971a,b). Both adults and larvae feed on various insects (both living and dead), e.g. the larvae and adults of Lepidoptera, larvae and pupae of Hymenoptera, Diptera, and larvae of Coleoptera: Chrysomelidae. Cannibalism occurs, especially among larvae, and all developmental stages also suck sap from plants (e.g. Devantoy 1948; Haber 1953; Putshkov 1961; Thompson & Simmonds 1965; Herting 1971, 1973, 1976; Kis 1984; Dioli 1986; Stehlík 1987; Rieger 2000; Wachmann *et al.* 2008). This species is considered mesophilous and a forest inhabitant. The vast majority of specimens collected have been caught on deciduous trees (*Acer*, *Alnus*, *Betula*, *Carpinus*, *Corylus avellana*, *Fagus*, *Populus tremula*, *Prunus*, *Quercus robur*, *Q. rubra*, *Salix*, *Sambucus*, *Sorbus aucuparia*, *Tilia*), less frequently on conifers (*Juniperus communis*, *Picea excelsa*, *Pinus silvestris*), shrubs (*Rubus fruticosa*), and herbaceous vegetation (*Filipendula*, *Urtica dioica*) (e.g., Mužík 1903; Schumacher 1910; Stobiecki 1915; Jordan 1940; Dupuis 1947, 1949; Smreczyński 1954; Strawiński 1956, 1959; Putshkov 1961; Josifov 1974; Lodos & Önder 1983; Dioli 1986; Stehlík 1987; Kula 1999; Bryja & Kula 2000; Rieger 2000; Goßner & Bräu 2004; Wachmann *et al.* 2008; Hanel & Kment 2009; this paper). However, there seems to be certain preference for alders (*Alnus glutinosa*) at least in the Central Europe (Spitzner 1892, Stobiecki 1915, Jordan 1940, Zebe 1963, Dioli 1986, Stehlík 1987, Rieger 2000, Bryja & Kment 2006).

Review of the records

The records are arranged chronologically. Codes for the Central European mapping grid (Ehrendorfer & Hamann 1965) follow Pruner & Míka (1996) and Novák (1989).

Bohemia (Fig. 3)

- Bohemia (Duda 1892, listed without locality)
- Hnidousy (5850), beaten from oak (*Quercus* sp.) together with *Pentatoma rufipes* (Linnaeus, 1758) [350 m a.s.l.] (Mužík 1903)
- Hlinsko (6261), 550–590 m a.s.l., beginning of June (no year), 1 ♀, Sekera lgt.[2)], P. Kment det. (coll. National Museum, Praha) (unpubl.)
- Kolín V (5957), [200–230 m a.s.l.], 16.v.1948, O. Kubík lgt. & det. (coll. O. Kubík, Regionální Muzeum v Kolíně) (Rus 2005)
- Praha – Hlubočepy, Prokopské údolí Valley (5952), 30.viii.1950, 1 ♂ on *Urtica dioica* in ruderal growth with *Robinia pseudoacacia* along the brook, 230 m a.s.l., P. Štys lgt. & det. (coll. P. Štys, Charles University, Praha)

[1)] Much of the biological information included in the paper by Stehlík (1987) is based on unpublished notes by M. Červinka, who specialized in the rearing of Central European Asopinae. Unfortunately, no voucher specimens for M. Červinka are preserved in collections (J. L. Stehlík, pers. comm.).

[2)] This record could be attributed to either Emil Sekera (1864–1944), who was born in Hlinsko and worked there for some time as a secondary school teacher between 1887–1919, or his brother Jan Sekera (1870–1919), who also collected true bugs and sent them to other specialists (see Koleška 1993).

- Praha – Zbraslav, Závist – hradiště (6052), 9.ix.1952, 1 ♂ shaken down from trees on the way from the railway station to the pavilion in rocky xerotherm forest with *Quercus*, *Carpinus betulus* and *Cornus mas*, 200–368 m a.s.l., P. Štys lgt. & det. (coll. P. Štys, Charles University, Praha)
- Kolín V (5957), [200–230 m a.s.l.], 14.ix.1952, O. Kubík lgt. & det. (coll. O. Kubík, Regionální Muzeum v Kolíně) (RUS 2005)
- Velký Osek (58–5957), 190 m a.s.l., 10.vi.1993, 1 ♀, V. Vrabec lgt., Z. Jinda det. (coll. Z. Jindra, Praha) (unpubl.)
- Plzeň, alluvium of Bolevecký potok Brook (6246), *Alnetum*, [350 m a.s.l.], no details (DOLEŽAL 1997)
- Tisá (5250), 'Tisá', birch stand, 600 m a.s.l., 1986–1998, 1 spec. shaken down from *Betula*, B. Dobšík det. (BRYJA & KULA 2000, KULA & BRYJA 2002)
- Jílové – Sněžník (5250), 'Sněžník', 540 m a.s.l., 1995–1996, 3 spec. shaken down from *Sorbus aucuparia*, E. Kula lgt., B. Dobšík det. (KULA 1999)
- Praha – Troja, Podhoří Nature Reserve (5852), 200–250 m a.s.l., 13.ix.2002, 1 ♂, Z. Jindra lgt. & det. (coll. Z. Jindra, Praha) (unpubl.)
- Dubá – Panská Ves, Mokřady horní Liběchovky Nature Reserve (5453), reed wetland, 250 m a.s.l., 19.ix.2002, 1 f.* swept from *Alnus glutinosa*, P. Kment lgt. & det. (coll. P. Kment, National Museum, Praha) (BRYJA & KMENT 2006)
- Jílové – Sněžník (5250), 'Sněžník', birch stand, 550 m a.s.l., 15.viii.2003, 1 ♂ shaken down from *Betula*, E. Kula lgt., P. Kment det. (coll. P. Kment, National Museum, Praha) (unpubl.)
- Jílové – Sněžník (5250), 'Letadlo A', birch stand, 460 m a.s.l., 12.ix.2003, 1 ♀ in yellow pan trap, E. Kula lgt., P. Kment det. (coll. P. Kment, National Museum, Praha) (unpubl.)
- Děčín – Maxičky (5151), 'Vlčák', birch stand, beating, 450 m a.s.l., 26.ix.2003, 1 ♂, E. Kula lgt., P. Kment det. (coll. P. Kment, National Museum, Praha) (unpubl.)
- Česká Kamenice, Dukelských hrdinů street (5152), 310 m a.s.l., 3.x.2004, 1 ♂ sitting on a wall, P. Kment lgt. & det. (coll. P. Kment, National Museum, Praha) (unpubl.)
- Plzeň – Bolevec, Petrovka Nature Reserve (6246), 350 m a.s.l., no details (ZAHRADNICKÝ & MACKOVČIN (2004), very probably referring to the same specimen as DOLEŽAL (1997))
- Praha – Troja, Podhoří Nature Reserve (5852), 200–250 m.a.s.l., 10.vii.2006, torso of 1 ♂, Z. Jindra observ. & det. (unpubl.)
- Jizbice env., Peklo u Nového Města nad Metují Nature Reserve (5663), 300–470 m a.s.l., 26.viii.2006, 2 spec. collected on the concrete railing of a bridge on a sunny day, T. Roudný lgt. & det., P. Kment revid. (coll. T. Roudný, Třebechovice pod Orebem) (unpubl.)
- Rozvadov, Diana National Nature Reserve (6341), Fagetum, 500–530 m a.s.l., 29.iv.2007, 1 ♀, Z. Andrš lgt., P. Kment det. (coll. Muzeum Chodska, Domažlice)
- Horní Pertoltice, Hraniční rybník Pond (5056), 315 m a.s.l., 4.v.–4.vi.2007, 1 ♀ in Malaise trap, J. Preisler & P. Vonička lgt., K. Hradil det. (coll. K. Hradil, Miletín) (unpubl.)
- Kladruby u Vlašimy (6255), forest park of Rehabilitační ústav hospital, 520 m a.s.l., 5.ix.2008, 1 ♂ on leaves of *Rubus fruticosus*, L. Hanel lgt. & det. (coll. L. Hanel, Kladruby) (HANEL & KMENT 2009)

Moravia and Silesia (Fig. 3)

- Romže bei Prossnitz [= Prostějov, Romže river valley] (6568), [220 m a.s.l.], on *Alnus glutinosa* (SPITZNER 1892, as *Platynopus sanguinipes*)
- bei Brünn [= Brno env.] (67–6865), [200–424 m a.s.l.], Fleischer lgt. (coll. Moravian Museum, Brno, as "Moravia, Fleischer") (SPITZNER 1892, as *Platynopus sanguinipes*)
- Přerovec (6173), [300 m a.s.l.], 12.viii.1936, 1 ♀, Palásek lgt., B. Dobšík det. (DOBŠÍK 1961, 1967)

- Čejč (7067), 190–210 m a.s.l., 1941, 1 ♀, M. Matoušek lgt., J. L. Stehlík det. (coll. Moravian Museum, Brno) (Stehlík 1987)
- Zlín (6771–72), [200–300 m a.s.l.], vii. (without year), A. Černý lgt., V. Balthasar det. (Balthasar 1942)
- Třebíč env. (6760), [400–480 m a.s.l.], 1 spec., Prof. Dichtl lgt., J. L. Stehlík det. (Stehlík 1943)
- Mokrá, Říčka valley below Bělkovský mlýn Mill (6766), [200 m a.s.l.], 2.x.1944, 1 ♂, M. Červinka lgt. (Dobšík 1950)
- Brno – centre, Husova ulice Street (6865), [220 m a.s.l.], 2 spec., J. L. Stehlík lgt. & det. (Dobšík 1950, Stehlík 1987)
- Brno – centre, Zelný trh Marketplace (6865), [230 m a.s.l.], 2 spec., J. L. Stehlík lgt. & det. (Dobšík 1950, Stehlík 1987)
- Brno – centre, Petrov (6865), [240 m a.s.l.], 2 spec., 21.x.1945, M. Červinka lgt. (Dobšík 1950, Stehlík 1987)
- Brno – centre, Údolní ulice Street (6865), [230 m a.s.l.], 9.xi.1945, 1 spec., M. Červinka lgt. (Dobšík 1950, Stehlík 1987)
- Ketkovice, near the confluence of the Chvojnice rivulet with the Oslava river (6863), [268–280 m a.s.l.], 15.vii.1947, 1 ♂ on *Alnus glutinosa*, M. Červinka lgt. (Stehlík 1987)
- Ketkovice, Oslava river valley SE of Chvojnice (6863), 250 m a.s.l., 15.vii.1947, 3rd and 4th instar larvae on *Alnus glutinosa*, M. Červinka lgt. (Stehlík 1987)
- Veverská Bitýška, valley of Bitýška Brook (6764), 280 m a.s.l., 18.vii.1947, 2nd instar larva on *Alnus glutinosa*, M. Červinka lgt. (Stehlík 1987)
- Bzenec (7069), [185 m a.s.l.], v.1948, 1 ♀, J. Matoušek lgt., B. Dobšík det. (coll. Moravian Museum, Brno) (Dobšík 1950)
- Osvětimany, valley of the Klimentský potok Brook (6969), 1.viii.1952, 310 m a.s.l., 1 ♂ on *Alnus glutinosa*; 380 m a.s.l., 1 ♂ on *Betula verrucosa*; 330 m a.s.l., 1 ♀ 4th instar larva on *Alnus glutinosa*; 440 m a.s.l., 5th instar larva on *Alnus glutinosa*; all M. Červinka lgt. (Stehlík 1987)
- Mokrá, valley of the Říčka rivulet (6766), 280–290 m a.s.l., 7.viii.1952, 1 ♂ 1 ♀ and 5th instar larva on *Alnus glutinosa*, M. Červinka lgt. (Stehlík 1987)
- Ketkovice, lower reaches of the Chvojnice rivulet valley (6863), 268–280 m a.s.l., 17.viii.1952, 1 ♂ and 4th instar larva on *Alnus glutinosa*, M. Červinka lgt. (Stehlík 1987);
- Buchlovice, Smraďavka stream valley (6969), 300 m a.s.l., 7.ix.1952, 1 ♀ on *Alnus glutinosa*, M. Červinka lgt. (Stehlík 1987)
- Radějov, 'Rozsocháč', valley of the Mandát stream (7170), 300 m a.s.l., 14.ix.1952, 1 ♀ on *Alnus glutinosa*, M. Červinka lgt. (Stehlík 1987)
- Čeložnice, 'Kameňák', Moštěnka river valley (6968), 300 m a.s.l., no date, 1 ♀ on *Alnus glutinosa*, no collector (Stehlík 1987)
- Studénka, Oderský luh (6274), swamp, [225 m a.s.l.], 29.ix.1996, 1 ♂ on *Alnus glutinosa*, J. Bryja lgt. & det. (coll. J. Bryja, Studenec) (Bryja & Kment 2001)
- Bzenec, environs of Stolařka Pond (7069), [170 m a.s.l.], 30.v.1998, 1 ♀ on old *Alnus glutinosa* trees along wood margin, V. Zeman lgt., P. Kment det. (coll. V. Zeman, Přerov) (Kment & Bryja 2001)
- Kunovice, Stará hora Hill (6970), gardens, [220 m a.s.l.], 17.vii.1998, 1 ♀ on flowers, M. Horsák lgt., P. Kment det. (coll. Petr Kment, National Museum, Praha) (Kment & Bryja 2001)
- Javorník, Jazevčí National Nature Reserve (7171), [350 m a.s.l.], 18.viii.2000, 1 ♀ swept from deciduous trees along wood margin, P. Kment lgt. & det. (coll. Petr Kment, National Museum, Praha) (Kment & Bryja 2001)
- Šilheřovice, Černý les NR (6075), [230–250 m a.s.l.], 8.ix.2002, 1 ♂ beaten from *Quercus* sp., M. Mantič lgt., P. Kment det. (coll. M. Mantič, Hlučín) (unpubl.)
- Dobrá u Frýdku-Místku, Kamenec Nature Monument (6376), [320 m a.s.l.], 6.ix.2004, 1 spec. swept from undergrowth of ash and alder wood, M. Roháčová lgt. & det. (coll. Beskydy Museum, Frýdek-Místek) (Roháčová 2005)

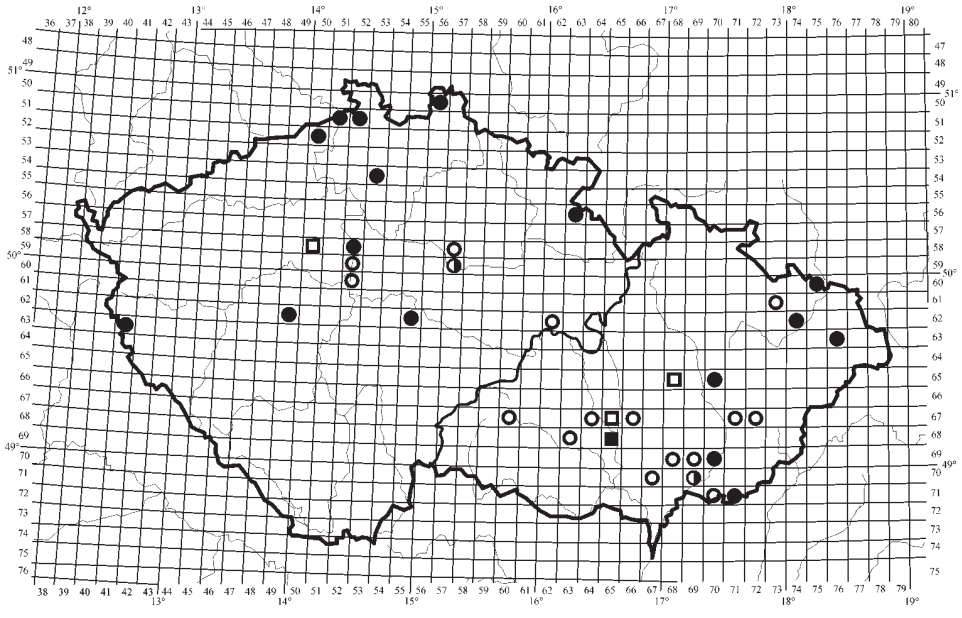


Fig. 3. The distribution of *Pinthaeus sanguinipes* (Fabricius, 1781) in the Czech Republic: open square – 1890–1903 only; solid square – both 1890–1903 and 1936–1952; open circle – 1936–1952 only; half-solid circle – both 1936–1952 and 1993–2009; solid circle – 1993–2009 only.

- Přerov, Žebračka National Nature Reserve (6570), 213 m a.s.l., vii.2009, 1 spec. photographed by M. Fiala (http://www.biolib.cz/cz/taxonimage/id94533/?taxonid=72015) (unpubl.)

Slovakia (Fig. 4)

- Circa Trencsinium [= Trenčín env.] (70–7174), K. Brancsik lgt. & det. (BRANCSIK 1891, as *Platynopus sanguinipes*; HORVÁTH 1897, BALTHASAR 1937)
- Homonna [= Humenné] (7097) (HORVÁTH 1897)
- Kis-Azar [= Malé Ozorovce] (7395) (HORVÁTH 1897)
- Pozsony [Bratislava] (7868–69) (HORVÁTH 1897, BALTHASAR 1937)
- S.-A.-Ujhely [= Slovenské Nové Mesto] (75–7696) (HORVÁTH 1897)
- Považí [region along River Váh, no exact record] (BALTHASAR 1937)
- Nové Mesto nad Váhom (7272–73), vi.1947, 1 ♀, M. Matoušek lgt., B. Dobšík det. (coll. Moravian Museum, Brno) (DOBŠÍK 1950)

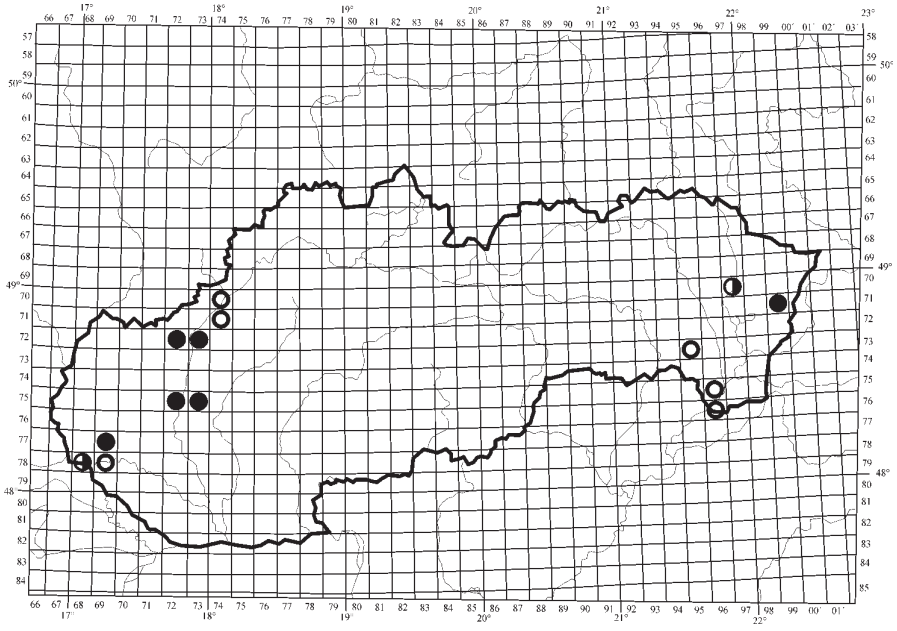


Fig. 4. The distribution of *Pinthaeus sanguinipes* (Fabricius, 1781) in Slovakia: open circle – before 1897 only; half-solid circle – both before 1897 and in 1947–1992; solid circle – 1947–1992 only.

- Remetské Hámre (7199), 250–500 m a.s.l., 17.vi.1951, 1 ♂, J. L. Stehlík lgt. & det. (coll. Moravian Museum, Brno) (Stehlík & Vavřínová 1994)
- Bratislava env., Malé Karpaty Mts. (7868), ca. 1952–1954, 1 ♀, J. Komárek lgt., P. Štys det. (coll. P. Štys, Charles University, Prague)
- Remetské Hámre (7199), 250–500 m a.s.l., vii.1957, 1 ♂ 1 ♀, J. Gottwald lgt., J. L. Stehlík det. (coll. Moravian Museum, Brno) (Stehlík & Vavřínová 1994)
- Svätý Jur, Jurský Šúr Reserve (7769), ix.–xii.1967 and iii.–iv.1968, 1 spec. sifted from litter in humid lowland forest, O. Štepanovičová & P. Kovačovský lgt. (Štepanovičová & Kovačovský 1971a,b)
- Hlohovec env., Soroš, Sedlisko reserve (7572–73), 1972–1977, number of specimens not given, M. Valenčík lgt., B. Dobšík det. (coll. Homeland Museum, Hlohovec) (Dobšík 1979)
- Humenné (7097), 7.vii.1992, 1 ♀, R. Kovář leg., K. Hradil det. (coll. K. Hradil, Miletín) (unpubl.)

Discussion

Pinthaeus sanguinipes was first listed from Bohemia by DUDA (1892). However, he failed to give any exact locality, nor is a relevant specimen preserved in the Duda collection (National Museum, Prague). The first exact Bohemian record, from Hnidousy (environs of Kladno), was thus published by MUŽÍK (1903). The first Moravian records also date back to the 1890's (SPITZNER 1892). After the MUŽÍK (1903) record there is a long gap in which no *P. sanguinipes* was collected. It must, however, be pointed out that there was no specialist in the terrestrial Heteroptera working at that time in the Czech Lands. The species appeared again in 1936 at Přerovec in Silesia (DOBŠÍK 1961, 1967). This was followed by many more records between 1941 and 1952 (Fig. 5; STEHLÍK 1987, RUS 2005, this paper). However, after 1952 it disappeared completely in both Bohemia and Moravia, despite intensive collecting efforts on the part of several specialists (e.g. L. Hoberlandt, J. L. Stehlík, B. Dobšík, P. Lauterer, P. Štys, Z. Jindra, J. Vilímová, and others). This second hiatus ended in 1993 in Bohemia (this paper) and 1996 in Moravia (BRYJA & KMENT 2001), followed by several new records from both regions up to 2009.

In Slovakia, more records date to before 1897 (HORVÁTH 1897), followed by isolated records during the entire 20th century (1947, 1951, *c*. 1952–1954, 1957, winter 1967/1968, 1972–1977, 1992). In Slovakia, little effort has gone into collecting in the last decade and there has been a lack of local specialists, so the current distribution of *P. sanguinipes* remains unexplored in this region. It is interesting that RIEGER (2000) observed a similarly disparate distribution pattern in Baden-Württemberg (*c*. 1875, 1901, 1904 [two records], 1946, 1953, 1963, 1985, 1992–1996 [10 records]).

For comparison, *Pinthaeus sanguinipes* was first listed in Poland, from Silesia, by SCHILLING (1844). Additional Polish records occur around the turn of 20th century (SMRECZYŃSKI 1907, STOBIECKI 1915), followed by exactly dated single records from 1902 (SMRECYŃSKI 1954), 1929 (SCHOLZ 1931), 1938 (LIS 1989), 1948 (SMRECYŃSKI 1954), four records from 1953–1955 (STRAWIŃSKI 1956, 1959; LIS 1990), and one record from 1958 (STRAWIŃSKI 1958). After 1958, there is a long gap in the record very similar to the situation in the Czech Republic, the species being rediscovered in Poland only in 2007 (HEBDA & LIS 2007). Additional new records from the Ojcowski National Park were published by CHŁOND & GORCZYCA (2009). Recently, it was also collected in northern Germany – in Mecklenburg-Western Pomerania for the first time in history, in Brandenburg for the first time after 1950 (ESSER 2009).

In terms of vertical distribution, STEHLÍK (1978) gave a range of 190–440 m a.s.l. in Moravia and STEHLÍK & VAVŘÍNOVÁ (1994) 100–500 m a.s.l. in Slovakia. In Bohemia the lowermost record is from 170 m a.s.l. (Velký Osek in the Labe lowlands) (this paper), the highest from Tisá in the environs of Děčínský Sněžník Mt., 600 m a.s.l. (BRYJA & KULA 2000, KULA & BRYJA 2002). However, one specimen from Hlinsko (Českomoravská vysočina Mts., 550–590 m a.s.l.) is dated to not later than the 1940s, so there seems to be no shift to higher altitudes observed in the recent warm period.

Such a pattern cannot be easily explained as simple oscillation of the northern border of the distribution range, as could be hypothesized for other species currently spreading northwards in the Czech Republic (e.g. *Oxycarenus pallens* (Herrich-Schaeffer, 1850) –

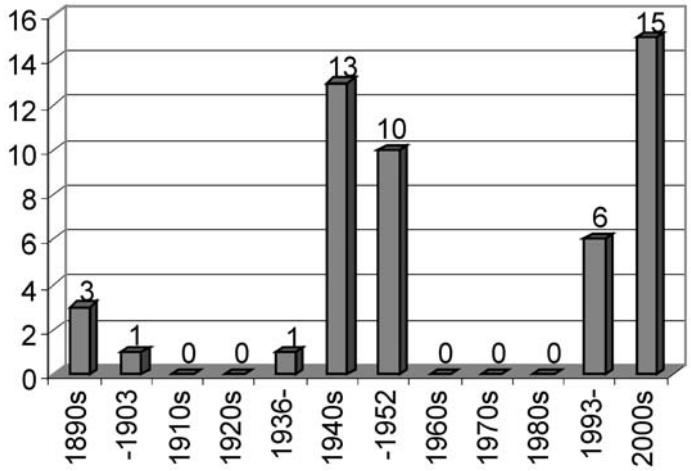


Fig. 5. Temporal distribution of the records of *Pinthaeus sanguinipes* (Fabricius, 1781) in the Czech Republic.

Krist & Kment (2006); *Liorhyssus hyalinus* (Fabricius, 1794) – Hradil *et al.* (2007); *Tropidothorax leucopterus* (Goeze, 1778) – Kment *et al.* (2009); and *Mantis religiosa* Linnaeus, 1758 – Janšta *et al.* (2008)). One factor possibly influencing such distribution instability may be fluctuations in prey populations, but no clear evidence has emerged to confirm this. Most of the published records of *P. sanguinipes* are based on specimens found in ones and twos. Only two published cases cite finding this species in any numbers (cf. Putshkov 1961, Rieger 2000). Jordan (1940) collected a larger sample of *P. sanguinipes* (15 males, 10 females, larvae) in August 1938 on alder trees in Mönau (Saxony, Germany), where they occurred together with numerous larvae of *Agelastica alni* (Linnaeus, 1758) (Coleoptera: Chrysomelidae). Zebe's (1963) record is very similar: "very numerous in forest at Männchbruch near Groß Gerau [Hesse, Germany] on *Alnus* with heavy outbreak of *Agelastica alni* L." Unfortunately, neither Jordan (1940) nor Zebe (1963) reported feeding on larvae or adults of this beetle. *Agelastica alni* was listed as prey of *P. sanguinipes* by Herting (1973), but M. Červenka established in laboratory conditions that *P. sanguinipes* avoids this species (Stehlík 1987). Rieger (2000) also suggests a possible relationship between the population fluctuations and fluctuations in parasitoids or possible concurrence with two other arboricolous Asopinae living in Central Europe, *Arma custos* (Fabricius, 1794) and *Trolius luridus* (Fabricius, 1775). The intensive and often excessive application of pesticides in the decades following the 1950's to control infestations of forest pests, partly the natural prey of *P. sanguinipes*, might also be responsible for its long absence from our fauna.

Fort all the conjecture, the sporadic occurrence of *P. sanguinipes* remains enigmatic. For this reason, it has not been included in the Red Lists of the invertebrates of the Czech Republic (KMENT & VILÍMOVÁ 2006) and Slovakia (ŠTEPANOVIČOVÁ & BIANCHI 2001).

Acknowledgements

We are indebted to Lubomír Hanel (Kladruby, Czech Republic), Marion Mantič (Hlučín, Czech Republic), Tomáš Roudný (Třebechovice pod Orebem, Czech Republic), and Pavel Štys (Charles University, Prague, Czech Republic) for sharing their records and photographs, and to Dominik Chłond (Department of Zoology, University of Silesia, Katowice, Poland) for information on the occurrence of *Pinthaeus sanguinipes* in Poland. This work was supported by Ministry of Culture of the Czech Republic grant MK00002327201 to the National Museum, Prague.

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