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# True-bugs (Hemiptera: Heteroptera) of the botanical garden in Štramberk in Moravia (Czech Republic)

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**Abstract**. A list of 62 species of terrestrial true-bugs collected in the botanical garden in Štramberk in Moravia (Czech Republic) is presented, among them *Brachynotocoris puncticornis* Reuter (Miridae), very rarely collected in the Czech Republic.

**Key words**: Hemiptera, Heteroptera, *Brachynotocoris*, botanical garden, faunistics, Štramberk, Czech Republic.

## Introduction

The botanical garden in Štramberk in Moravia has been created in 1997 in the old limestone quarry named "Kamenarka" located on the southern slopes of the "Bila hora" Mount (Pavlik 2005; Kuśka 2007) (Fig. 1 & Fig. 2).

The only comprehensive faunistic studies on Heteroptera of Štramberk was carried out almost sixty years ago (Roubal 1955), and it concerned the Kotouč Mount ("Kotouč u Štramberka").

The aim of the present study was to investigate the heteropterous fauna of the botanical garden in Štramberk, and compare it with a list of species already recorded from the Kotouč Mount in Štramberk (Roubal 1955). The material was collected in August 2010, from different parts of the garden; several specimens were collected at light.

Species recorded for the first time from the area of Štramberk were indicated by asterisks (*).


**Fig. 1**. The botanical garden information board at its entrance.

**Fig. 2**. A general view of the botanical garden in Štramberk.

## A list of species

### *Acanthosomatidae*

*1. *Elasmostethus interstinctus* (Linnaeus, 1758). 1 ex. 12/13. 08. 2010, at light.

### *Alydidae*

*2. *Alydus calcaratus* (Linnaeus, 1758). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

### *Anthocoridae*

3. *Orius niger* (Wolff, 1811). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

4. *Orius minutus* (Linnaeus, 1758). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

### *Berytidae*

*5. *Gampsocoris culicinus culicinus* Seidenstücker, 1948. 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

### *Coreidae*

*6. *Bathysolen nubilus* (Fallén, 1807). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

*7. *Coriomeris scabricornis* (Panzer, 1805). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

8. *Enoplops scapha* (Fabricius, 1794). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

*9. *Syromastus rhombeus* (Linnaeus, 1767). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

### *Heterogastridae*

*10. *Heterogaster artemisiae* Schilling, 1829. 2 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

### *Lygaeidae*

11. *Lygaeus equestris* (Linnaeus, 1758). 4 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 8 exx.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 6 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

*12. *Lygaeus simulans* Deckert, 1985. 2 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 5 exx.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 8 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

13. *Ortholomus punctipennis* (Herrich-Schaeffer, 1838). 3 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

14. *Nysius senecionis senecionis* (Schilling, 1829). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 2 exx.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

### *Miridae*

15. *Adelphocoris lineolatus* (Goeze, 1778). 2 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 3 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 3 exx.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 5 exx.: 13. 08. 2010, upper part of the quarry (natural plant community). 3 exx.: 12/13. 08. 2010, at light.

*16. *Adelphocoris seticornis* (Fabricius, 1775). 2 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 4 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

*17. ***Brachynotocoris puncticornis* Reuter, 1880**. 1ex.: 12/13. 08. 2010, at light.

This species was recorded from the Czech Republic for the first time only ten years ago (Hradil *et al.* 2002). It lives on *Fraxinus excelsior* and *F. ornus* (Göllner-Scheiding 1992; Aukema 1993). The species is known from several European countries (Bulgaria, European Turkey, France, Germany, Hungary, Italy, Moldavia, Netherlands, Portugal, Romania, Spain, Ukraine), from North Africa (Morocco, Tunisia), and three Asian countries (Georgia, Armenia, Azerbaijan) (Kerzhner & Josifov 1999; Drapolyuk 2001). Moreover, it was also introduced to North America (Kerzhner & Josifov 1999, Drapolyuk 2001).

18. *Chlamydatus pulicarius* Fallén, 1807. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 5 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

19. *Chlamydatus pullus* (Reuter, 1870). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

20. *Deraeocoris ruber* (Linnaeus, 1758). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

21. *Halticus apterus* (Linnaeus, 1758). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 3 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

22. *Lygus pratensis* (Linnaeus, 1758). 5 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 4 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 2 exx.: 12/13. 08. 2010, at light. 4 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

23. *Lygus rugulipennis* Poppius, 1911. 1 ex.: 12/13. 08. 2010, at light.

*24. *Monalocoris filicis* (Linnaeus, 1758). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

*25. *Notostira erratica* (Linnaeus, 1758). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010,

slopes (plant communities at their feet and vertical calcareous faces). 4 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

*26. *Orthops kalmii* (Linnaeus, 1758). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

27. *Phytocoris varipes* Boheman, 1852. 3 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 3 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 3 exx.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 1 ex.: 12/13. 08. 2010, at light. 8 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

*28. *Polymerus unifasciatus* (Fabricius, 1794). 3 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 4 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 3 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

*29. *Pseudoloxops coccineus* (Meyer-Dür, 1843). 1 ex.: 12/13. 08. 2010, at light.

*30. *Stenodema laevigata* (Linnaeus, 1758). 3 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 4 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

*31. *Trigonotylus caelestialium* (Kirkaldy, 1902). 1 ex.: 12/13. 08. 2010, at light.

### *Nabidae*

*32. *Himacerus apterus* (Fabricius, 1798). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

33. *Himacerus mirmicoides* (O. Costa, 1834). 2 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

34. *Nabis brevis brevis* (Scholtz, 1847). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

*35. *Nabis pseudoferus pseudoferus* Remane, 1949. 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

36. *Nabis rugosus* (Linnaeus, 1758). 3 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

### *Oxycarenidae*

37. *Macroplax preyssleri* (Fieber, 1837). 2 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

### *Pentatomidae*

38. *Aelia acuminata* (Linnaeus, 1758). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 3 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 4 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

39. *Carpocoris fuscispinus* (Boheman, 1851). 2 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

40. *Carpocoris purpureipennis* (De Geer, 1773). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

41. *Dolycoris baccarum* (Linnaeus, 1758). 2 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 2 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 3 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

42. *Eurydema oleracea* (Linnaeus, 1758). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: slopes (plant communities at their feet and vertical calcareous faces). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

*43. *Eysarcoris aeneus* (Scopoli, 1763). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

*44. *Graphosoma lineatum* (Linnaeus, 1758). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

*45. *Palomena prasina* (Linnaeus, 1761). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 2 exx.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

*46. *Pentatoma rufipes* (Linnaeus, 1758). 2 exx.: 12/13. 08. 2010, at light.

*47. *Piezodorus lituratus* (Fabricius, 1794). 2 exx.: 10. 08. 2010, part with plant community being a result of natural succession.

48. *Sciocoris cursitans cursitans* (Fabricius, 1794). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 2 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

### *Plataspidae*

*49. *Coptosoma scutellatum* (Geoffroy, 1785). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

### *Pyrrhocoridae*

50. *Pyrrhocoris apterus* (Linnaeus, 1758). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

### *Rhopalidae*

51. *Corizus hyoscyami* (Linnaeus, 1758). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession.

*52. *Rhopalus conspersus* (Fieber, 1837). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

*53. *Rhopalus parumpunctatus* Schilling, 1829. 4 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 7 exx.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 6 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

54. *Rhopalus subrufus* (Gmelin, 1790). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

55. *Stictopleurus abutilon* (Rossi, 1790). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 1 ex.: 13. 08. 2010, upper part of the quarry (natural plant community).

*56. *Stictopleurus punctatonervosus* (Goeze, 1778). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

### *Rhyparochromidae*

57. *Megalonotus chiragra* (Fabricius, 1794). 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes).

*58. *Pterotmetus staphyliniformis* (Schilling, 1829). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession.

59. *Rhyparochromus phoeniceus* (Rossi, 1794). 3 exx.: 10. 08. 2010, part with plant community being a result of natural succession. 4 exx.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces). 4 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

*60. *Stygnocoris rusticus* (Fallén, 1807). 2 exx.: 13. 08. 2010, upper part of the quarry (natural plant community).

### *Scutelleridae*

*61. *Eurygaster maura* (Linnaeus, 1758). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession. 1 ex.: 11. 08. 2010, floor of the quarry (lawns mixed with calcareous marshes). 1 ex.: 12. 08. 2010, slopes (plant communities at their feet and vertical calcareous faces).

*62. *Eurygaster testudinaria* (Geoffroy, 1785). 1 ex.: 10. 08. 2010, part with plant community being a result of natural succession.

## Conclusion

Because, the botanical garden in Štramberk originated more than twenty years after the first faunistic studies on Heteroptera of Štramberk (Roubal 1955), its heteropterous fauna was compared with a list of the Heteroptera species already recorded from the Kotouč Mount by Roubal (1955).

Of 62 species collected in the city botanical garden, as many as 32 species were recorded for the first time from Štramberk. It is more than a half of the species number already known from that area; such a number of collected species can suggest that wise creation of new biotopes by man, can increase the local biodiversity.

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