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Unexpected Coleoptera and Lepidoptera (Insecta) biodiversity in the surroundings of a copper mine in Sredna Gora Mountains (Bulgaria)

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Despite the proximity of Sredna Gora Mountains to Sofia, the insect assemblages of this region are poorly studied. Recently, as a result of research carried out as part of an Environmental Impact Assessment on the future development of a mine near Panaguirishte Town (in the Natura 2000 Protected Area, 'Sredna Gora', BG0001389), a rich diversity of insects was discovered, with 103 Coleoptera species and 315 Lepidoptera species recorded.

This research was conducted during a short one-season field study of the surrounding areas of an operating cooper mine. Special attention was paid to protected species and their conservation status. Fourteen species of beetles are of conservation significance (three species protected under the Biodiversity Act and EEC 92/43, six species included in the IUCN red list, six endemic species, one relict and one rare species). Thirty-two species of butterflies of conservation importance were also recorded.

The results obtained reflect the anthropogenic influence on the surrounding areas of the mine. Assessment of the conservation value of these surrounding areas was conducted and recommendations for their future use in mining activities were given.

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