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1.	Background: Dispersal rates, i.e. the effective number of dispersing individuals per unit time, are the product of dispersal capacity, i.e. a species physiological potential for dispersal, dispersal behaviour, i.e. the decision to leave a habitat patch in favour of another, and connectivity of occupied habitat. Thus, dispersal of species that are highly specialised to a certain habitat is limited by habitat availability. Species inhabiting very stable environments may also adopt a sedentary life-style. Both factors should lead to strong genetic differentiation in highly specialised species inhabiting stable environments. These two factors apply to our model species <i>Rhyacophila pubescens</i> a highly specialised freshwater insect that occurs in tufa springs, a very stable habitat.
2.	This paper deals with the question of the role landscape metrics can play in the investigation, evaluation and monitoring of landscape structure, and which linkages between landscape structure and biodiversity are known. In the first part, the scientific state of the art is presented; in the second part, the meaning of landscape metrics for nature protection, landscape management and biodiversity monitoring is discussed. A number of studies indicate that such metrics on an aggregated, overall landscape level are quite appropriate to describe the state of biodiversity
3.	Climate warming threatens biodiversity at global, regional and local levels by causing irreversible changes to species populations and biological communities. The Himalayan region is highly vulnerable to climate warming. This calls for efficient environmental management strategies because biodiversity monitoring is costly, particularly for the developing countries of the Himalaya. Species distribution modeling (SDM) represents a tool that can be used to identify vulnerable areas where biodiversity monitoring and conservation are required most urgently and can be prioritized
4.	Butterfly larvae, or caterpillars, are extremely variable in their shapes, but all are of the 'eruciform' type that is characteristic of Lepidoptera (Fig. 1). The head capsule is strongly built. It carries two short 'antennae' (3 articles), which are not homologous to those of the adults, since the latter will be generated independently, during metamorphosis. Vision is guaranteed by 12 'ommatidia' (stemmata): 6 on each side, allowing to focus the image only from very short distances.
5.	The goals of the present work are therefore: 1) to assess the phylogenetic position and the monophyly of each of the genera using data of adult phenotypes; 2) to describe three new species which significantly extend the geographical and ecological range of the group; 3) to provide an updated overview of all species by reporting their type specimen labels, depositories, synonyms, chresonyms and known distribution; 4) to offer an identification key for each genus.
6.	The aim of this study is to examine its status at the localities where it was recorded in the first half of the 20th century and summarize all available data on its distribution in the Czech Republic. We found a considerable decline of the species in the Labe River basin as it was not re-collected at the localities of historic occurrence in the Krkonoše Mts., Orlické hory Mts. and Šumava Mts. and was not recorded at any new locality. This disappearance was probably a result of acidification of freshwater habitats in these regions in the second half of the 20th century. At present, <i>Perla grandis</i> is only frequent and locally abundant in montane streams in the Beskydy and Jeseníky Mts.
7.	Good conservation management is underpinned by a thorough understanding of species' historical and contemporary dispersal capabilities along with the possible adaptive or neutral processes behind any spatio-temporal genetic structuring. These issues are investigated with respect to the rare damselfly <i>Coenagrion mercuriale</i> (Charpentier) – the only odonate species currently listed in the U.K.'s Biodiversity Action Plan – in east Devon where its distribution has become fragmented.



8.	<p>Numbers of adult stoneflies captured weekly in the traps were related positively to air temperature and related negatively to wind speed. Meteorological conditions during daylight showed stronger relationships with flight activity than conditions at night.</p> <p>There was inter-site variation in the strength of weather effects on stonefly flight. Wind speed was significant at only one site, which had higher average wind speed than the other side.</p>
9.	<p>Twenty-two species, half of them Alpine endemics, were sampled. Species richness and taxonomic distinctness did not show any significant difference among habitat types; conversely, these differences became significant when the landform type was considered. Total activity density and the frequency of brachypterous, endemic and predatory species showed significant differences between both habitat and landform types. An indicator species analysis identified twelve species linked to a specific habitat type and thirteen species linked to a specific landform type.</p>
10.	<p>Our paper presents the first evidences of the use of cavities created by the longhorn beetles <i>Cerambyx cerdo</i> as hibernation sites in Central Europe. During research conducted in 2017–2018 in SW Poland bats hibernating in <i>Cerambyx</i> cavities were noted in 52.6% of the monitored trees (<math>n = 19</math>). All bats belonged to the genus <i>Pipistrellus</i>, and individuals identified to the species level were <i>Pipistrellus nathusii</i>. Bats were found at a distance of 5–15 cm from the edge of the entrance holes at the height of 150–305 cm above the ground, significantly more often in south and west-oriented cavities</p>
11.	<p>Although the rich insect fossil record has helped to chart the appearance of many phenotypic innovations, data are scarce for a number of key periods. One such period is that following the End-Permian Extinction, recognized as the most catastrophic of all extinction events. We recently discovered several 240-million-year-old insect fossils in the Mount San Giorgio Lagerstätte (Switzerland–Italy) that are remarkable for their state of preservation (including internal organs and soft tissues), and because they extend the records of their respective taxa by up to 200 million years</p>
12.	<p>Where potentially invasive crayfish colonise, the combination of their rapid population increase and omnivorous feeding habits may have consequences for the structure of freshwater food webs (Lodge et al., 1998). In the short term, non-indigenous crayfish have the potential to reduce the biomass and species richness of macroinvertebrates, hydrophytes, periphyton and pelagic/surface microalgae</p>
13.	<p>We present a review of the etymology of zoological taxonomic names with emphasis on the most unusual examples. The names were divided into several categories, starting from the most common – given after morphological features – through inspiration from mythology, legends, and classic literature but also from fictional and nonfictional pop-culture characters (e.g., music, movies or cartoons), science, and politics. A separate category includes zoological names created using word-play and figures of speech such as tautonyms, acronyms, anagrams, and palindromes</p>
14.	<p>The role of entomology in the development of ecology as a science is often overlooked, but important concepts in ecology such as the role and types of mimicry, the theoretical development of population dynamics and island biogeography all have their roots in the pioneering work of entomologists.</p> <p>3. Insect products have long played a part in the economies of human civilizations stretching back several thousand years</p>
15.	<p>The bivalve <i>Dreissena polymorpha</i> has invaded many freshwater ecosystems worldwide in recent decades. Because of their high fecundity and ability to settle on almost any solid substratum, zebra mussels usually outcompete the resident species and cause severe damage to waterworks. Time series of <i>D. polymorpha</i> densities display a variety of dynamical patterns, including very irregular behaviours. Unfortunately, there is a lack of mathematical modelling that could explain these patterns</p>
16.	<p>A sudden increase and subsequent sharp decrease of catches of dragonflies in a searchlight trap, with <i>Pantala flavescens</i> Fabricius (Odonata: Libellulidae) predominating, observed at Beihuang Island in the centre of the Bohai Gulf, in 2003 and 2004, indicated a seasonal migration of these insects over the sea during the night in China. The movements were associated with the onset of fog. 2. Simultaneous radar observations indicated that the nocturnally migrating dragonflies generally flew at altitudes of up to 1000 m above sea level</p>



17.	We used data from two recent atlas surveys performed on a 1 · 1 km grid at an 11-year interval (1992–94 and 2003–05). We modelled the elevational gradient of avifaunal composition, using a sample-based approach, in an effort to detect evidence for an upward elevational shift of bird zonation. Changes in species richness were controlled for. The results from this analysis were compared with those obtained using a species-based approach
18.	This study tests the hypothesis that temperature and desiccation tolerance are associated with the elevational ranges of 12 ground beetle species (genus <i>Nebria</i> ) occurring on Mt. Rainier, Washington, U.S.A. Species from higher elevations did not have greater cold tolerance limits than lower-elevation species (all species ranged from -3.5 to -4.1°C), despite a steep decline in minimum temperature with elevation. Although heat tolerance limits varied among species (from 32.0 to 37.0°C), this variation was not generally associated with the relative elevational range of a species.
19.	With 1 million insect species named, this suggests that 80% remain to be discovered and that a greater focus should be placed on less-studied taxa such as many families of Coleoptera, Diptera, and Hymenoptera and on poorly sampled parts of the world. DNA tools have revealed many new species in taxonomically intractable groups, but unbiased studies of previously wellresearched insect faunas indicate that 1–2% of species may be truly cryptic
20.	The organisms with the best chance for survival under such conditions are extremophiles, like some species of Bacteria and Archaea, Rotifera, several species of Nematoda, some of the arthropods and Tardigrada (water bears). There is no denying that tardigrades are one of the toughest animals on our planet and are the most unique in the extremophiles group. Tardigrada are very small animals (50 to 2,100 µm in length), and they inhabit great number of Earth environments.
21.	Taxonomy is a scientific discipline that has provided the universal naming and classification system of biodiversity for centuries and continues effectively to accommodate new knowledge. A recent publication by Garnett and Christidis [1] expressed concerns regarding the difficulty that taxonomic changes represent for conservation efforts and proposed the establishment of a system to govern taxonomic changes. Placing governance over the science of taxonomy blurs the distinction between taxonomy and nomenclature.
22.	Large carnivores, such as brown bears ( <i>Ursus arctos</i> ), are flagship species for the conservation of biodiversity and their reintroduction represents a strong challenge. However, the results of reintroductions have only recently been documented in the literature. Given the global decline of large carnivores, documenting the results of such attempts is crucial for future conservation management. Here we examined the reintroduction of brown bears into the Italian Alps. The majority of bears released (10 individuals) adapted well to the release area and this resulted in the increase of the brown bear population
23.	We show that across the globe these animals have evolved towards a small number of regularly-spaced body sizes, and that locally co-existing species are either very similar in size or differ by at least 35%. Surprisingly, intermediate size differences (10–20%) are rare. As body-size strongly reflects functional aspects such as the food that these generalist predators can eat, these beetles thus form relatively distinct groups of functional look-a-likes.
24.	Worldwide urbanisation and use of mobile and wireless technologies (5G, Internet of Things) is leading to the proliferation of anthropogenic electromagnetic radiation (EMR) and campaigning voices continue to call for the risk to human health and wildlife to be recognised. Pollinators provide many benefits to nature and humankind, but face multiple anthropogenic threats. Here, we assess whether artificial light at night (ALAN) and anthropogenic radiofrequency electromagnetic radiation (AREMR), such as used in wireless technologies (4G, 5G) or emitted from power lines, represent an additional and growing threat to pollinators
25.	In salmonids, prey size is known to change with body size, as larger fish shift their preferences towards larger prey (Keeley & Grant 1997). In lakes, small salmonids feed primarily on invertebrates while large individuals are frequently piscivorous (Malmquist et al. 1992, Madenjian et al. 1998). In streams, relationships between prey size and body size of salmonids have been established for small fish (<14.5 cm), which generally feed on invertebrates