

Buchbesprechungen / Book reviews

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McCosh D. J. & Rich Tim C. G.: Atlas of British and Irish hawkweeds (*Pilosella* L. and *Hieracium* L.). – London: Botanical Society of the British Isles, 2011. – ISBN 978-0-901158-44-4. – i + 496 S., 430 Punktverbreitungskarten, sw. Abb.; broschiert. – Preis: GBP 17,50.

Im 2002 erschienenen “New atlas of the British & Irish flora” wurden – von wenigen *Pilosella*-Sippen abgesehen – keine Verbreitungskarten für die Habichtskräuter präsentiert mit der Begründung, die zahlreichen Mikrospesies seien nur von wenigen Spezialisten bestimmbar. Das verwunderte insofern, als schon zum Zeitpunkt des Erscheinens bei vielen britischen Endemiten die Verbreitung vollständig bekannt war. Ein recht voluminöser Band aus der BSBI-Reihe füllt diese Lücke nun vollständig. Für 10 *Pilosella*- und 412 *Hieracium*-Arten werden die bekannten Daten, ganz überwiegend Ergebnis von Herbarrevisionen, in Gitternetzkarten übertragen. Die Kartier- und Darstellungsmethodik entspricht derjenigen des Atlas mit 100 Quadratkilometer großen Feldern; differenziert wird zwischen Nachweisen vor und seit 1960. Den Karten sind beigelegt knappe Angaben zur Verbreitung auf den Britischen Inseln und außerhalb derselben, zur IUCN-Gefährdungskategorie sowie eine Silhouettenabbildung eines Herbarexemplars der jeweiligen Sippe. Die Taxonomie folgt weitgehend der Florenbearbeitung von Sell & Murrell (2006). Abschließende Listen fassen die pro vice-county nachgewiesenen Taxa zusammen. Bis maximal knapp 70 Sippen wurden pro Grundfeld nachgewiesen.

Von dem ein oder anderen Detail aus dem reichen Erfahrungsschatz kontinentaleuropäischer Atlas-Werke hätten sich auch die Briten durchaus inspirieren lassen können. Der Zeitschnitt im Jahre 1960 liegt inzwischen doch arg weit in der Vergangenheit, vor allem in Anbetracht des drastischen Landschaftswandels. 50 Jahre alte Daten können nur bedingt die aktuelle Verbreitung darstellen. Auch eine Differenzierung zwischen Nachweisen, die auf Herbarbelegen basieren (die große Masse) und Geländebeobachtungen wäre kartographisch leicht umsetzbar gewesen. Seitenverweise zur Beschreibung der Arten in der Flora von Sell & Murrell hätten als Service problemlos eingefügt werden können.

Warum gibt es ein solches Werk nicht auch in Deutschland oder anderen mitteleuropäischen Ländern? Die Ursachen sind vielfältig. Die Formenvielfalt bei *Pilosella* beispielsweise ist nicht vergleichbar mit der sehr

armen Flora auf den Britischen Inseln. Viele Formenkreise bei *Hieracium* sind noch nicht entschlüsselt. Und die Situation in den Alpen, wo eine äußerst reiche *Hieracium*-Flora wächst, übertrifft in ihrer Komplexität selbst die endemitenreichen Gebirge Britanniens bei weitem. Für Kontinentaleuropäer sollte die Arbeit aber dennoch Ansporn sein, die bisher in Haupt- und Zwischenarten zusammengefassten und – wenn überhaupt – auf diesem taxonomischen Level kartographisch erfassten Sippen weiter zu untergliedern und ihre Chorologie zu klären. Die zunächst etwas “primitiv” anmutenden Schattenrisse geben bei vielen Sippen einen guten Eindruck vom Habitus der Pflanzen; die Sippen werden in der britischen Flora zwar ausführlich beschrieben, aber nicht immer abgebildet. Bei der Mehrzahl der Taxa handelt es sich um Endemiten mit kleinen Verbreitungsgebieten. Einige, vor allem von Jordan und Boreau beschriebene westeuropäische Sippen kommen auch in Deutschland vor. Für *Hieracium*-Kenner ist der neue Atlas also auch auf dem Kontinent eine willkommene Neuerscheinung.

Ralf Hand (Berlin)

McPherson S. (ed. by Fleischmann A. & Robinson A.): Carnivorous plants and their habitats. – Poole: Redfern Natural History Productions, 2010. – Vol. 1: ISBN 978-0-9558918-4-7, vol. 2: 978-0-9558918-5-4. – xvi + 723 p. and x + 719 p., 799 col. phot.; hardcover. – Price: GBP 34.99 per vol.

Stewart McPherson's *Carnivorous plants and their habitats* easily sets the new gold standard for books on carnivorous plants that both appeal to a broad audience and at the same time are at the bleeding edge of carnivorous plant research. That the first criterion is met can already be guessed by glancing at the overwhelming number and quality of photographs, maps and sketches, while the fulfilment of the second criterion is visible, e.g. in the abundance of references to the most recent research articles and the contribution of new species descriptions in the Appendix.

In this book, detailed and up-to-date information is provided for all currently recognised carnivorous angiosperm genera, including a few genera for which the truly carnivorous status remains to be unambiguously shown. In view of the somewhat blurred border between non-carnivorous and carnivorous plants (a situation pointed

out at various places throughout the book) the inclusion of candidates with questionable status of carnivory is further testimony to Stewart McPherson's endeavour to provide a truly complete overview on our current understanding of carnivorous plant diversity. And he clearly delivers.

The first chapter provides the historical background of carnivorous plant research, illustrating the beginnings of carnivorous plant research and the growing of acceptance of the concept of plants as carnivores. Detailed information is provided on the role of Darwin and on the change of the definition of plant carnivory since Darwin's time.

The next chapter gives an overview of the present structural diversity of carnivorous plants, introducing the various trap types. The concept of sub-carnivorous plants (also known by the less advisable terms pre- or proto-carnivorous plants) is introduced: plants for which no "proof" of carnivory according to the currently accepted definition exists.

The third chapter deals with the evolution of carnivorous plants and was contributed by Andreas Fleischmann. Based on a review of molecular-phylogenetic research of the past two decades, the author covers the stunning number of times that carnivory is believed to have evolved among higher plants (at least 10 times independently) and then focuses on the evolution and putative paths to carnivory and accompanying series of key innovations within each angiosperm order currently known to contain carnivores. The hypothetical and still often incomplete, preliminary or speculative character of our knowledge on carnivorous plant evolution is emphasised. The chapter concludes with notes on detritivores, coprophages and the related somewhat vague circumscription of plant carnivory, and finally briefly discusses the evolutionary success of carnivory among flowering plants.

A chapter on mutualists and infauna follows, again nicely illustrated with photographs e.g. of various arthropods that can be found living on or associated with carnivorous plant species. Remarks follow on how the plants manage to reduce the probability of their pollinators being killed by the own trapping devices. The last chapter in this initial series of chapters on more general topics describes the habitats in which carnivorous plants can be found.

In the following approximately 1000 pages of the book the reader is introduced to all carnivorous genera, ordered by trap type. The decision to sort by trap type rather than phylogenetic relationships or taxonomy may be a good one given the broad audience that the book is aimed at. More likely than not, trap similarity can more easily be appreciated by the non-taxonomist as a backbone structure guiding through several kilograms packed with information.

The remainder of the first volume starts with snap traps and pitchers. The second volume continues with sections on flypaper traps, corkscrew traps and bladder

traps. Each section begins with an explanation of trap architecture and function and then continues with a treatment of all genera falling under the trap category at hand. As an exception, *Ibicella* and *Proboscidea* are treated in the same chapter, which makes sense given their rather unclear status both taxonomically and with respect to carnivory. Each genus-specific chapter presents information on the geographic range of the genus, plant morphology and ecology (including habitats and associated life). Most chapters also include notes on traditional uses, conservation biology and tips for cultivation. For the larger genera (such as *Drosera*, *Nepenthes*, *Pinguicula*), a section on individual species is added. Throughout these chapters, the latest publications on physiology, taxonomy and phylogenetics of the genera are taken into account. It was a smart choice by Stewart McPherson to hand over the chapters on *Genlisea* and *Utricularia* to Andreas Fleischmann, probably the leading expert on *Lentibulariaceae* in the world. The chapter on *Philcoxia* was contributed by Caio Guilherme Pereira and Rafael Silva Oliveira.

The last chapter of the main part of the book is dedicated to the future of carnivorous plants, discussing threats for the survival of carnivorous plant diversity such as overcollection, habitat loss, or the introduction of non-native organisms. Information on various nurseries and on carnivorous plant conservation concludes the second volume.

Finally, the Appendix comprises four independent taxonomic descriptions of new *Nepenthes* species by McPherson and colleagues: *Nepenthes gantungensis*, *N. hamiguitanensis*, and *N. palawanensis* from the Philippines and *N. holdenii* from Cambodia. They are followed by a paper by François Mey that provides historical background and an improved description for *N. thorelii*. The book also features an index and even a glossary.

Barely any work of comparable size is 100 % error-free, and the present book can be no exception. However, it seems to contain extremely few, mostly negligibly tiny errors, such as "724" sticky leaved carnivorous plant species (p. 53) or a reference to Fig. 38 that does not really illustrate the complexity of evolutionary research when it apparently should. This scarceness of errors is remarkable given the dimension of the undertaking.

In sum, the text is easily understandable for the non-specialist and at the same time very detailed, always referring to the most recent research. The book is extraordinarily rich in breath-taking photographs, many by Stewart McPherson, many contributed by the editors or co-authors of certain sections of the book, or others.

If in search of a complete, up-to-date, lovingly crafted introduction to carnivorous plants of the world, look no further than Stewart McPherson's Carnivorous plants and their habitats. If you are a carnivorous plant enthusiast already, this book is a must-have.

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