

BOOK REVIEW

Insectpedia: a brief compendium of insect lore

Eric R. Eaton (illustrated by Amy Jean Porter), 2022.
Pedia Books - Princeton University Press, 200 pp.,
11.43 × 17.15 cm
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This is another nice book for entomologists - but not only! - written by Eric R. Eaton with illustrations by Amy Jean Porter. In our Journal, an announcement of the book “WASP” from the same author was published in 2021: <http://www.bulletinofinsectology.org/pdfarticles/vol74-2021-102-102wasps.pdf>

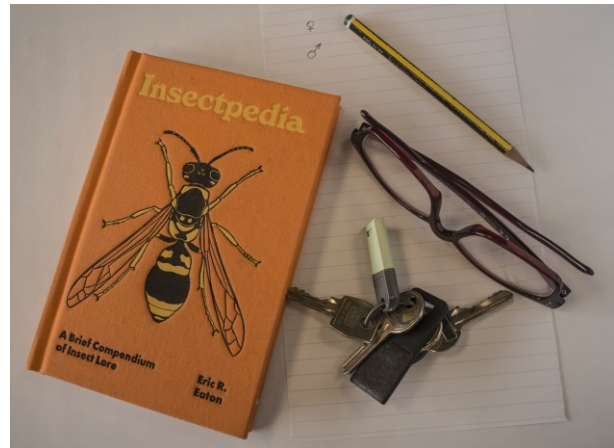
Now the entomologist Eric Eaton gives us the opportunity to read “A fun and fact-filled A-Z treasury for the insect lover in all of us”. In Wikipedia, everyone can find a lot of topics regarding entomology. Of course, this pocket book, “Insectpedia”, cannot contain so much information on entomological science as Wikipedia or other books and dictionaries of entomology. However, the idea to write entries in alphabetical order with insect stories, curiosity, behaviour and folklore may help the reader in the knowledge of “an occult world of dominators” as was defined by the Italian entomologist Guido Grandi (1886-1970). He believed that insects are uncontested dominators of the emerged lands of our planet for many reasons. One of the reasons was the observation of insect plasticity and resistance that just after a few generations occur in many harmful species, which, as consequence, may no longer be killed with insecticides. Unfortunately, as it is possible to read in “Insectpedia”, the most susceptible ones (but not the pests!) may also ‘disappear’: see, for instance, the entry ‘xerces’.

Many insecticides may kill insects as you can find in the ‘insect apocalypse’ entry. The problem for humans is that, as shown above, extinctions do not concern insect pests! Another interesting entry on this topic is ‘endangered insects’.

Coming back to the preface of this book, it is nice that “Insectpedia” «aims to refute those fear and ignite an appreciation of insects and those who study them».

Only one small blame is regarding the entry ‘biocontrol’ when it is indicated that: «... many species introduced to control invasive insects and plants have had deleterious impacts on native species». Deleterious (i.e. noxious or harmful?) could be a too strong term, maybe it is better to state that the introduction of beneficial insects may produce non target effects or not be always effective to control the invasive new pest. It is known that it is very difficult to predict if the artificial introductions of natural enemies provoke damages to the environment. No long term highly environmental risk due to introduction of exotic arthropod predators and parasitoids was really demonstrated till now.

It could be necessary a long time to evaluate risk. So, usually farmers are obliged to use pesticides. In the mid time (may be years) what are the damages and side effects of chemical control alone against insect pests? The target non native invasive insect pests may move to a new geographical area, when they are already resistant to several insecticide active ingredients. Not always biocontrol will be completely effective against non native insect pests, but the negative impacts of an establishment of an exotic predator or parasitoid have not been demonstrated yet as more dangerous to the environment and biodiversity than the use of chemical control and subsequent ‘pesticide treadmill’! This is another interesting entry that could be read on “Insectpedia”!



Usually, the item ‘pesticide treadmill’ is not always appreciated by farmers, extension service technicians or dealers of pesticides, but indeed, it is well and very clearly explained in “Insectpedia”. As many agricultural entomologists know, it is a really bad situation that may occur in our agroecosystems.

It is also important the entry ‘IPM’ - integrated pest management - with a clear explanation about the recommendation to use insecticides just only when they are necessary and not as a preventive measure. It is a correct way to show the problem to non-experts in applied entomology or environmentalists. This could be also used in case of the adoption of Genetic Engineering plants, i.e. that is another preventive control.

It is very nice the entry ‘pollinators’. In agroecosystems the conservation of these beneficial insects is so important that all farmers and people must know them. Linked to pollinators is the entry ‘fig insects’. *Blastophaga psenes*, a tiny pollinator that is in the cover of our journal Bulletin of Insectology. In its absence the production of figs would drop to zero.

It is odd that an entry such as ‘brochosomes’, that it is almost impossible to find also in the entomological and prestigious dictionary, vice versa is written in detail. The link between brochosomes and ‘Malpighian tubules’, remembering their original findings by the Italian anatomist Marcello Malpighi, is sometime not known by non-specialists.

Finally, some entries stimulate for sure the curiosity to many readers, just two entries for all: ‘tock-tokkies’ and ‘zombie lady beetle’!

In the last paragraph, entitled ‘afterword’, the sentence, reported here below, exactly reflects my opinion, and gives a nice report of the new deal in biodiversity conservation for a better world. The «...transition from a pest-killing mentality to an interest in the conservation of insect diversity must overcome the inertia of profit-making enterprise, and accommodate endeavors that are necessary for the survival of entire ecosystems».

Due to portable size “Insectpedia” could be really put inside the entomological bag and rucksack together with the typical equipment: the sweeping net, bottles for insect trapping and collection, etc. The new systems such as “instant insect recognition” via smartphone for people or young naturalist entomologists could be a further enhancement technique useful for an integration of knowledge in entomology. It could be better to start to learn reading “Insectpedia”. A book it is much better than just an app on the smartphone!

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