

## HOME IS WHERE THE WASPS ARE

Review of:

Howard Ensign Evans 1963. *Wasp Farm*. Garden City, NY: Natural History Press 178 pp.

[35th in a series on "naturalist-in" books; see [www.ckstarr.net/reviews\\_of\\_naturalist.htm](http://www.ckstarr.net/reviews_of_naturalist.htm)]

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Solitary wasps are abundant and diverse throughout the inhabitable world. In a typical nesting cycle, a mated female digs or builds a nest cell, repeatedly hunts for prey and stings each of them into paralysis and takes it back to nest, where she finally lays an egg in the cell and seals it. The prey -- kept fresh because they are still alive -- serve as food for the larva that in the end breaks out of the cell as an adult to begin the cycle anew.

Within this general cycle lies a wealth of differences that have occupied the attention of some very smart naturalists through the decades. Two main parameters -- nest structure and prey array -- show the pattern of this diversity especially well. For example, 40 species of the genus *Trypoxylon* are known from Trinidad (Starr & Hook 2003). We predict with confidence that all use mud in building their nests, because every studied species of *Trypoxylon* in the world builds with mud. Similarly, while some other wasps characteristically hunt crickets or flies, we predict that our *Trypoxylon* hunt only spiders, because that is what all studied species everywhere hunt. We are not dogmatic about this, and if we ever turned up a soil-burrowing or fly-hunting *Trypoxylon* here or anywhere, that would embrace this surprise. On the other hand, it would surprise us to find that any of our three known *Oxybelus* species do not burrow in the soil or hunt flies. Of course, within *Trypoxylon* there is a great deal of diversity in how those mud nests are formed and which spiders are stashed in them.

We are now in possession of an impressive mass of comparative knowledge of solitary wasps throughout the world, summarized a generation ago by Iwata (1976). The American entomologist Howard E. Evans (1919-2002) was the single most important contributor to this edifice. Although he was far from a gregarious man, he had a wonderful way with the written word and did much to bring nature and a biologist's outlook to the wider public. Perhaps his best-known book is *Life on a Little Known Planet* (Evans 1968), the core thesis of which is that there is a whole other world here on Earth -- the world of little creatures -- that is all but unknown to most people. I am delighted to see my favourite chapter, titled "The Emotional and Intellectual Life of the Cockroach" included in a volume of his selected writings (Evans 2005).

In 1954 the newlywed Howard & Mary Alice Evans bought a house on eight acres of mostly rocky land in New York state. The former chicken farm was covered with bushes and brambles, forested in one corner, with sand pits. They probably got it cheap, as it was away from any residential or commercial district, and what can you do with a place like that?

The answer is seen in the book's title. They set about making the area hospitable to a diversity of wasps by providing or preserving nesting places and encouraging the wasps' food. As Evans puts it, "Attracting wasps is not difficult; in fact, it is easier than

not attracting them. One merely needs to be lazy." In addition to ensuring plenty of unkempt vegetation, they put out artificial nest sites, like putting out nest boxes for certain kinds of birds.

After an introduction to Wasp Farm, Evans devotes 14 illustrated chapters to particular groups of wasps that he found there. Chapters have lovely titles, such as "Of Spring and Spider Wasps", "Stinkbugs for Dinner" and "Thirteen Ways to Carry a Dead Fly", the latter obviously suggested by Wallace Stevens's celebrated poem "Thirteen Ways of Looking at a Blackbird".

Like many naturalist-in authors, Evans likes a snappy opening, and many of his chapters start with sentences like "We tend to take August pretty much for granted" and "Have you ever eaten a stinkbug?" and "Life is full of frustrations, large and small; and small ones repeated continually are as bad as large ones." The chapter on "The Secret Lives of Sand Wasps" begins "There is scarcely a place on the face of the earth more sterile and uninviting than the central part of an active sand dune." Even so, in the hottest part of the day during the hottest time of year, a sand dune may be teeming with a particular wasp. *Bembix pruinosa*, the chapter's main character, and its parasites are found in almost every north-american dune east of the Rocky Mountains. The wasp is busy hunting and storing flies in its cells, the parasites are busy trying to despoil the cells, and hardly any other animal is to be seen in this forbidding environment.

Each chapter ends with a glossary of the wasps treated and references for further reading, his way of encouraging the reader to become a wasp watcher and make original findings. While he does not give a list of the solitary wasps on the farm, more than 100 species appeared to nest there regularly. There are a great many narratives of particular wasps and their hunting, as well as how they solve problems of getting prey to the nest. Many species are set in the context of congeneric species studied elsewhere.

The book is also enriched by narrative accounts of how Evans and others came to learn particular things about certain wasps. As an example, Iwata (1976) recorded 12 ways that wasps transport prey. Evans added one more -- *Clypeadon* carries ants in a special clasping device at the tip of the abdomen -- and relates its discovery. He has an attractive way of telling how a chance observation gave rise to a problem and then saying how it was solved (sometimes years later through another chance observation). And, in discussing this or that wasp, he makes occasional asides on individual entomologists who contributed to what we now know. In doing so, Evans conveys a very important lesson to the general public, that science is above all an activity, and a very human one at that.

On Wasp Farm, as everywhere in the cold temperate zone, seasonality was a central factor in all of life, and Evans has a fine sense of it. He looks forward to the seasonal appearance of some common wasps each year.

A key drawback to rearing brood in a fixed nest is the horde of natural enemies that beset it, as any treatise on the nesting of birds will emphasize. Solitary wasps are likewise under constant pressure from nest parasites, an important theme of this book. Evans compares three species of *Philanthus* (bee-wolves) on Wasp Farm. They overlap in nest sites and season, yet differ in body size and their usual prey. Their niche separation, Evans concludes, arise out of behavioural differences in nesting related to

avoiding parasites.

Like the first great observer of solitary wasps, Jean-Henri Fabre (1823-1915), Howard Evans believed in getting up close and personal with his bugs. If getting a good look at their behaviour required him to lie on the ground with his face pressed to a burrow, that was the obvious thing to do. It is this intimate involvement in their lives that makes *Wasp Farm*, perhaps, the most engaging of his many writings.

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