

THE LONG-BARRELED BORE

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If the caliber of that title sounds a bit queer, consider for a moment the boring auger of the Ichneumon wasp. For here is a drilling tool that defies comparison or comprehension. Of course reference is made to the amazing ovipositor of *Megarhyssa lunator* and its several similar species.

Can the reader imagine boring into wood a decimeter deep with a mere thread? Or even surmise the purpose for doing so in the first place? Yet here is an insect that has the amazing ability to locate beetle larvae in the cambium layer of a pine tree by tapping the bark with the antennae. (Is this ultrasonics or sonar?)

Then the insect assumes the stance as shown in the cover illustration, and accurately aligns a "drill rig," which is composed of two spring-loaded sheaths to guide the threadlike egg tube to its ultimate destination of parasitizing the hapless larvae of the bark beetle.

The intervening layers of bark are penetrated by the ovipositor in a whip-sawing action, since that grim gimlet is equipped with microscopic saw teeth as seen in Figure 1. Many species can penetrate several centimeters of wood to reach their prey.

One can only wonder at the ingenuity of this adept drillpress. What a monumental sequence of mutations must have been necessary through trial and error to develop such a specific instrument! But can this precision be attributed to blind and unpremeditated permutation? Mere

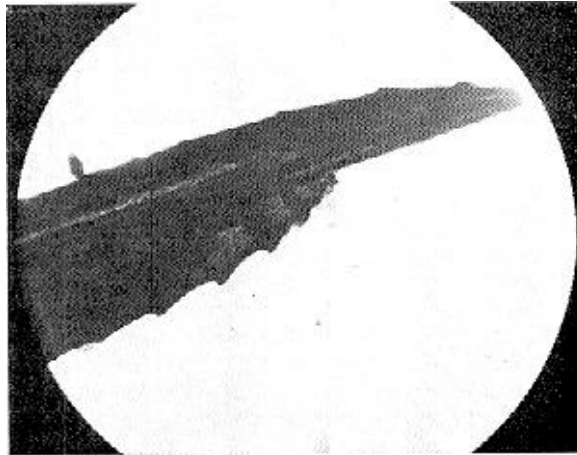


Figure 1. Photomicrograph of the drill point on the ovipositor of the Ichneumon, showing the saw-like serrations. The picture is magnified 150 times. Photo by Willis E. Keithley.

evolutionary speculation cannot suffice to bridge those yawning gaps of instinctive purpose, deliberate design, intelligent integration, and that perennial and plaguing question of survival before the perfection of such a complicated contrivance.

Confronted with such an intelligent and astute invention as an Ichneumon, it is not irrational to exclaim with John Milton,

Great are thy works Jehovah!
infinite Thy power!
what thought can measure
thee or tongue
Relate thee!

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WAS EVOLUTION REALLY POSSIBLE?

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The theory of evolution was propounded by Charles Darwin, who claimed about 100 years ago that all existing life on earth—animal and vegetable—developed from lower creatures, in a continuous chain of adventitious processes. The first life forms—the living cell—had come forth supposedly out of non-living material. Despite widespread acceptance of this doctrine in scientific and lay circles, it contains much that is imaginary and it will not stand critical examination in the light of modern science.

Darwin's Theory

The Origin of Species — that was the title of Charles Darwin's book, first published some 100 years ago. In it, Darwin developed a theory based on the possession by each type of creature of its specific characteristics and attributes.

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So long as these attributes are attuned to the natural conditions prevailing within the particular time and environment, these creatures continue to exist, proliferating generations bearing these same successful characteristics, and indeed improving them, by means of the process of "natural selection." This "natural selection" is the outcome of a continuous struggle for existence, in which the strongest survive.