

MIMICRY IN NATURE

BY WILLIAM J. HOLLAND

*Director Emeritus of the Carnegie Museum and Honorary Curator
of Entomology and Paleontology*

ONE of the most striking phenomena in nature is protective mimicry, a phase of which is illustrated on the cover page of this issue of the CARNEGIE MAGAZINE.

In the struggle for existence many animals become adapted in form and color to their environment, thus securing protection from their enemies. The tints of the furry coats of mammals, or of the feathers of birds, hide them from attack. Shades of brown or gray help to conceal rabbits, squirrels, and field mice from the eye of the hawk. The dappled pelt of the giraffe standing under the acacias melts into the surroundings, and only a keen eye can see him. The white winter plumage of the ptarmigan matches the snowy landscape in which it lives. Various greens and olives help to conceal the birds among the branches. Fishes are adapted in color and form to the bottom on which they occur. In the insect world there are wonderful adaptations of this kind. Many moths resemble lichens and mossy spots on the trunks of trees; some butterflies have patterns on the under side which match the rocks upon which they rest or the foliage of the forests in which they live. When they fold their wings they are invisible. Such adaptation to environment is often amazing. The writer re-

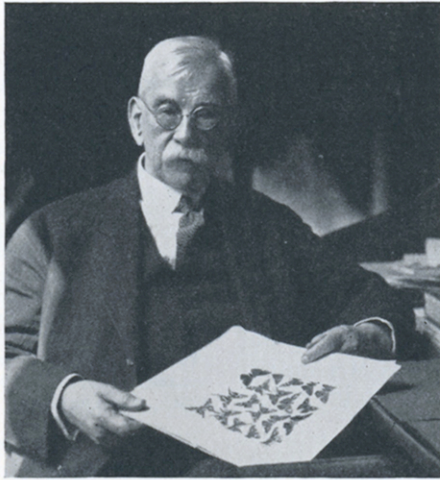
calls a beetle which almost exactly represents the dry burr of a tropical tree upon which its larva feeds, the illusion being detected only when the creature moves.

Another phase of protective mimicry is the one illustrated on the cover, showing what is called a protected species,

which again is mimicked by one that is known as an unprotected species. Some butterflies are protected by the nauseous and poisonous qualities which inhere in them. These protected species are immune from attack. Among the butterflies the Danaids are thus immune. One of these insects is very common in the United States. It is known as the Monarch, or the

Milk-weed Butterfly. It is shown in the upper figure on the cover page and any reader of this Magazine will recognize it. This creature is protected in the manner which I have just described. It is not a toothsome morsel for any bird or mammal. The sight of it apparently provokes disgust among creatures which might be expected to seize it as food.

The lower figure represents a butterfly belonging to a family which does not have the nauseous qualities of the Danaids, and which, whether in the form of the larva, the chrysalis, or on the wing, are greedily seized by in-



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sectivorous animals. In the lapse of ages one of the species belonging to this group has become assimilated in color and form to the Monarch. Its popular name is the Viceroy. It distinctly mimics the protected butterfly in almost all respects, as may be seen by comparing the two figures. It gains immunity from attack by being similar in color and form to the protected species shown above it, and also by association with the distasteful brown butterfly. Cases in which an edible species has come to resemble an inedible species are numerous, especially in the tropics of both hemispheres.

PITTSBURGH'S GROWING FAME

[From the Minneapolis Journal]

INTERNATIONAL exhibitions are all the rage. Perhaps the Carnegie Institute in Pittsburgh leads with its great international painting exhibition, its handsome prizes and wide publicity, but there are other exhibitions of a similar nature which are gaining in public approval.

The Art Institute of Chicago has its international water-color exhibition, and Venice assembles a show of contemporary work from all countries where the art of painting is practiced. Then there is the "Tri-National"—French, English, and American—and perhaps a few others which have escaped our attention. The Paris salons, of course, although not deliberately planned with the international idea in view, attract entries from the four corners of the globe.

But Carnegie, in the last issue of the monthly magazine issued by the Institute, is pleading for increased prizes. Other galleries, they declare, are able to offer more. To keep up Pittsburgh's prestige as the leading center for the

international exchange of ideas in paint, they ask the public to provide further prize money. They say:

The stimulations of these annual shows upon our own community are many and mighty. Many thousands of our citizens come, and come again, to see, to study, to praise, to censure, in general to evaluate the year's output of paintings; to check its adherence to, or its departure from, the eternal standards of truth and beauty; to behold whether, in conforming to the eternal standards, it has advanced new ideas worthy of perpetuation; and whether, if it has departed from the eternal standards, it has merely expressed its ventures in forms of essential failure. And in these critical inspections, we all grow into a larger knowledge and appreciation of art.

And then the children from the schools—thousands of them—come trooping daily, all through the year, into these art halls, and, while the paintings are on exhibition, these younger visitors sharpen their faculties, and they, too, learn what good painting is—and perhaps, in some examples, what good painting is not.

Again, it was a rare thing to see Pittsburghers purchasing the pictures that were shown upon the Institute's walls when these exhibitions began. Two or three were sold—the rest went back to their authors. But now all that is changed, and the exhibition is no sooner opened than there is a friendly rivalry and a gentle rush to make the first selections, so that hundreds of these productions are now at home in the houses of our citizens.

There are three things that stimulate the painters of the world and make them eager to send their works to Pittsburgh: first, the joy of showing their creations amidst noble companions; second, the excellent opportunities for a sale; and third, the fine chance of winning a prize.

The Twenty-eighth Carnegie International opens in Pittsburgh October 17. After its close, December 9, the foreign section will be shown at Baltimore and in St. Louis for six weeks each. Who will be first in painting this year? Will it be a modernist? Will it be an American? Those are questions the answers to which are awaited with not a little suspense throughout almost all of the civilized world.

YES, INDEED

We should carry forward every social improvement to the uttermost limit of human perfectibility, by the free action of mind upon mind, not by the obtrusive intervention of misapplied force.

—FRANKLIN PIERCE,

Fourteenth President of the United States