

in tentacles, consisting of thin, straight, hair-like
pedicels, usually carrying a gland on the
summit. The mechanism of the tentacles
is lateral, with expansions, how their
inflation and re-expansion are produced.
Full more correct are the experiments which the
author describes in illustration of "the digestive
power of the secretion of diatoms." He explains
by a series of tests the comparative effect of the
acid secretion of the plant on different substances,
such as morsels of moderately roasted meat, carti-
lage, bone, enamel, and dentine, or small portions
of gelatine, milk, and so forth. Some of these
were much more energetic and rapid indica-
tion of the tentacles, and keep them inflated
for a much longer time than do others.
As a matter, for example, is as tough a substance
as a fish's scale as by water, its prompt dis-
solution by the secretion of diatoms and subse-
quent absorption is perhaps one of the most
striking ones. Mr. Darwin also examined six
other species of diatoms—the *diatoms*, a
native of Portugal, and other plants, some of
them the inhabitants of distant countries, chiefly
for the sake of ascertaining whether they ought in-
deed be considered as diatoms. The result of his investigations will be
very interesting to the advanced student in
natural history, but to convey any idea of his
diatom theories and scientific definitions in this
concise manner would be utterly impossible. We
are so accustomed to regard the foliage of trees
and plants as destroyed by insects that it is
almost startling at first sight to read of the
diatoms exerting a fatal influence over the
leaves. The majority of readers who take
up the book would probably imagine that
"insectivorous plants" meant those that were
most exposed to be preyed upon by insects. But
to turn the information which Mr. Darwin has
supplied to a practical purpose it might be sug-
gested that gardeners should cultivate the diatoms
and other insectivorous plants in order to
exterminate at least a portion of the myriads
of flies which infest our plants and fruit
trees. Nothing so commonplace, however, comes
within the scope of his instructions, even to
the last word his descriptions are dry, technical,
and couched in compact language, intelligible
alone at the first glance to philosophic inquiries.
For this reason, as well as for the other difficulties
already mentioned, no satisfactory review of the
work could be written unless the author could
have been followed in laying down his first prin-
ciples, tracing secondary causes, and arriving at
conclusions in a way which would have extended
the volume to a much greater length than was
desirable. *W. H. C. [Signature]*

the information offered in his sketches.

"Insectivorous Plants," as already indicated, is a work of a very different stamp, and for several reasons demands but short notice. In the first place it proceeds from the pen of Professor Darwin, a sufficient guarantee for the ability displayed in its compilation; and, in the next, his scientific conclusions would require a longer and more searching analysis to do them full justice than our limited space would allow. The book also is adapted for the use of students rather than ordinary readers, and is more interesting to the inquirers into what is curious than to the admirers of what is pleasing in Nature; the former class being incontestably much less numerous than the latter. Our remarks, therefore, will be restricted to giving a general idea of the nature and design of this fresh contribution from Mr. Darwin to the department of scientific literature. He explains that during the summer of 1860 his attention was first drawn individually to the subject of "Insectivorous Plants" by observing how large a number of insects were caught by the leaves of the common sun-dew (*Drosera rotundifolia*) on a heath in Sussex. He had heard that insects were thus caught, but knew nothing further on the subject. To examine more closely, he gathered by chance a dozen plants bearing 56 fully-expanded leaves, and on 31 of these dead insects or remnants of them adhered, and no doubt many more would have been caught afterwards by the same leaves and still more by those as yet not expanded. He inspected other leaves with a similar result, and explains that flies (Diptera) are captured much oftener than other insects. The largest kind which he has seen caught was a small butterfly; but the Rev. H. M. Wilkinson has informed him that he found a large living dragonfly with its body firmly held by two leaves. Many plants, he adds, cause the death of insects—the sticky buds, for instance, of the horse-chestnuts—without thereby receiving, as far as can be perceived, any advantage; but it soon became evident to him that *Drosera* was excellently adapted for the special purpose of catching insects, so that the subject seemed well worthy of investigation. Hence he was induced to collect materials for the compilation of this volume, and the minuteness of detail exhibited in the discussion of his subject proves at once that he threw himself into the work with his accustomed energy and perseverance. Without entering closely into the technicalities of his expositions, it will suffice to say that he describes the *Drosera* as to the proportions of its leaves, their peculiar organisation, and the effects produced upon them by exterior objects. The most prominent as well as curious feature of these leaves is their whole upper surface being covered with gland-bearing filaments or tentacles, consisting of thin, straight, hair-like pedicels, severally carrying a gland on the summit. The sensitiveness of the tentacles is tested, with explanations how their inflection and re-expansion are produced. Still more curious are the experiments which the author describes in illustration of "the digestive power of the secretion of *Drosera*." He explains by a series of tests the comparative effect of the acid secretion of the plant on different substances, such as morsels of moderately roasted meat, cartilage, bone, enamel, and dentine, or small portions of gelatine, milk, and so forth. Some of these cause much more energetic and rapid inflection of the tentacles, and keep them inflected for a much longer time than do others. As cartilage, for example, is so tough a substance and is so little acted on by water, its prompt dissolution by the secretion of *Drosera* and subsequent absorption is perhaps one of the most striking cases. Mr. Darwin also examined six other species of *Drosera*—the *Drosophyllum*, a native of Portugal, and other plants, some of them the inhabitants of distant countries, chiefly for the sake of ascertaining whether they caught insects. The result of his investigations will be very interesting to the advanced student in natural history, but to convey any idea of his abstruse theories and scientific definitions in this cursory notice would be utterly impossible. We are so accustomed to regard the foliage of trees and plants as destroyed by insects that it is almost startling at first sight to read of the former exercising a fatal influence over the latter. The majority of readers who take up the book would probably imagine that "insectivorous plants" meant those that were most exposed to be preyed upon by insects. But to turn the information which Mr. Darwin has supplied to a practical purpose it might be suggested that gardeners should cultivate the *Drosera* and other insectivorous plants in order to exterminate at least a portion of the myriads of flies which infest our plants and fruit trees. Nothing so commonplace, however, comes within the scope of his instructions; even to the last word his disquisitions are dry, technical, and couched in cramped language, intelligible alone at the first glance to philosophic inquiries. For this reason, as well as for the other difficulties already mentioned, no satisfactory review of the work could be attained unless the author could have been followed in laying down his first principles, tracing secondary causes, and arriving at conclusions in a way which would have extended this notice to a much greater length than was desirable.