
MINOR SCIENTIFIC NOTICES.

The Structure and Distribution of Coral Reefs.
By Charles Darwin, M.A., F.R.S., F.G.S. With
three Plates. Second Edition, revised. (Smith,
Elder, & Co.) It is now nearly forty years since
Mr. Darwin, in a memorable paper read before the
Geological Society of London, first sketched the
outlines of his famous theory of Coral Reefs. The
views originally advanced in that memoir were soon
afterwards worked out in detail, and published in
the shape of the well-known volume which formed
the first part of the *Geology of the Voyage of the
Beagle*. It is the second edition of this volume
which is now in our hands. Mr. Darwin's admir-
able investigations on the structure of coral reefs,
the theory which he philosophically deduced
from those investigations, and the grand general-
isations which flowed from his theory, are too
well known to need more than a passing reference.
By carefully comparing the different forms of reef
one with another, he was enabled not only to
classify them, but to establish a relation, pre-
viously unsuspected, between the several classes.
Observations on the growth of the reef-building
polypes had shown that their range in depth is
confined within narrow limits; and coupling this
fact with the hypothesis that certain areas of land
are gradually sinking, Mr. Darwin was led to the
construction of a theory which offered at once a
simple and satisfactory explanation of all the ob-
served phenomena. It has fallen to the lot of few
men of science to see more of corals and coral reefs
than Professor Dana has seen; and it is therefore
instructive to hear how Mr. Darwin's theory is
viewed by so competent a judge. "The theory of
Darwin," says Professor Dana, "gave me, in my
ocean journeyings, not only light but delight, since
facts found their places under it so readily, and
derived from it so wide a bearing on the earth's

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history." At the same time it was hardly to be expected that a theory of such originality as Mr. Darwin's should stand for more than three decades unassailed by hostile criticism; nor would this, perhaps, have been desirable, for a sound theory, like a reef-forming coral, flourishes best where the waves are strongest. Yet the only serious objections which have been urged against Mr. Darwin's views are those which were raised a few years ago by Professor Carl Semper. In a *Reisebericht* published in Siebold and Kölliker's *Zeitschrift*, and partly reproduced in an expanded form as an appendix to his popular lectures on the Philippine Islands, the Würzburg naturalist explained his views "im Gegensatz zur Darwin'schen Senkungstheorie." The publication of a new edition of Mr. Darwin's work has afforded its author an opportunity of replying to these strictures. At the same time Mr. Darwin has taken occasion to insert a number of new facts which lend themselves to the support of his theory, whilst he has revised the entire work, and almost rewritten some of the later chapters. The basis of evidence on which the theory rests is thus broadened, and the work in its present form is more than ever entitled to occupy the position which it has always held—that of our standard treatise on Coral Reefs.