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Nearly all of the types and illustrated specimens, most of the routine material (especially the newer samples), the complete faunal list and the photographic negatives are deposited in the Museum of Natural History in Basel, Switzerland (the type and figured specimens under C ... catalogue numbers). Some of the figured Trinidad material was borrowed from the U.S. National Museum in Washington and a few other specimens belong to Shell's collection and are stored in Holland.

Stratigraphical annotations

Soldado Rock is a steep two-topped islet with a surface of about sixty by one hundred meters. Both tops, the higher of which is 36 meters above sea level, consist of limestones and in between lies a saddle of softer silts and marls.

In Part I of the present work (KUGLER & CAUDRI 1975), the stratigraphy of the Rock is discussed in detail, and for the exposed section and our latest analysis of it the reader is referred to the North-South profile and to the Distribution Chart of the Larger Foraminifera given at the end of that paper.

Recapitulating our conclusions, we now distinguish thirteen beds, one more than established by KUGLER in 1938 (Bed 9a, the „Asterocyclus marl“). Beds 1 and 2 belong to the Paleocene Soldado Formation and Beds 3 to 10 to the Upper Eocene (equivalent to the San Fernando Formation of Trinidad). Bed 11 is recognized as a slumped mass of Early to Middle Eocene age (Boca de Serpiente Formation) which has slipped into the basal part of the Upper Eocene deposits. Erosion, redeposition and reworking of isolated fossils have played an important part in the history of the Eocene section. In order to unravel the badly mixed faunas we had to make use not only of the samples collected from the beds „in situ“, but also of the contents of the innumerable erratic blocks which are scattered all over the islet. Bed 12, a low ridge of barren sandstone off the North shore, does not fit in with the more or less coherent section and is left out of the discussion.

In our chapter on the Geological History of Soldado Rock (Part I, p. 427), reasons are given as to why the stratigraphical sequence of the beds, from old to young, has now been construed as follows:

Beds 1 and 2, Soldado Formation, Paleocene

Bed 11, Boca de Serpiente Formation, Lower to early Middle Eocene

Beds 3, 4 and 10
Beds 5 to 9a } San Fernando Formation, Upper Eocene

In this section, Beds 3 and 4 represent the transgression of the Upper Eocene over the Paleocene. Bed 10 is the equivalent of this same basal member of the Upper Eocene, but developed under more open sea, off-shore, conditions.

The fauna in these beds shows everywhere an enormous vertical and lateral variation in its composition, which is typical of shallow water deposits. Some of the limestones contain large amounts of algae and are of a true reefal nature. Others represent reefal debris, both from the exposed talus and the lagoonal back waters. Remnants of a typical reef limestone are, for instance, the blocks of the Paleocene „Atheccocyclina limestone“, where flat Larger Foraminifera, algae, mollusks, echinoids and Globigerinas (s.l.) are concentrated in great abundance in separate pockets.

But also in the stratified sediments the uneven distribution of the fossils is striking. Highly fossiliferous layers alternate with barren streaks, and the same bed, when followed laterally over any kind of distance, may show great differences in the fauna. For instance, the sample taken from Bed 9 at its outcrop in the measured section of the saddle (K. 2952, in square D-3 on the map) is barren, but the equivalent sample K. 1499 (E-2) carries a very rich fauna; Bed 7 is represented in the saddle by a typical Hantkenina marl with only a handful of Larger Foraminifera (K. 2954, D-4), but in K. 2855 (F-3) they occur in great quantities. This may be due to local variations in depth as well as to passive selection by sea currents or gravity. In several places, the presence of entire populations of Larger Foraminifera, from embryos to large adult forms of both generations and unsorted as to shape, is proof of sedimentation under very quiet water conditions on a level bottom. Turbidity currents must be held responsible for the later introduction of reworked older fossils.

The different faunas of Soldado Rock

VAUGHAN & COLE were well aware that the material at their disposal was insufficient to work out anything more elaborate than a "Preliminary Report". Our much more extensive collection now makes it possible to present a more complete inventory of the Soldado faunas. On the other hand, a few names that figure in the 1941 list are left out: *Discocyclina cubensis* (already dropped by VAUGHAN in 1945) and *Lepidocyclina* "sp. indet. 2" are insufficiently characterized for recognition; *Lepidocyclina* sp. aff. *ocalana pseudocarinata* has been included in the synonymy of our new species *Lepidocyclina spatiosa*, and *Lepidocyclina macdonaldi*, mentioned as "probably present in a mixture of K. 1316 and K. 1499", has been ignored.

The heavy reworking that has affected nearly all the deposits of the San Fernando Formation on Soldado Rock made it difficult to establish the vertical range of some of the species and even interfered with the age determination of the beds. In Bed 3, for instance, the Late Eocene fauna, represented by one specimen each of *Operculinoides soldadensis* and *Lepidocyclina pustulosa trinitatis*, is all but obscured by the very rich reworked Paleocene material. For the pertinent data we refer to the Distribution Chart (see Part 1), but for quick orientation a review of the autochthonous assemblages in the various beds (in numerical order) may be useful:

Bed 1

no trace of Larger Foraminifera found

Bed 2

"in situ":

Ranikothalia sp., small thickwalled form ("antillea")

? *Neodiscocyclina* sp., very small form

Amphistegina sp. div., including *A. cf. undecima*?

Dasyclad algae

In slumped masses and erratic blocks from deposits that probably have covered Bed 2 before erosion (for terminology, see Part 1 of this publication):