

V. von Ebner - "Ueber den feineren Bau der
Skelettheile der Kalkschwämme nebst
Bemerkungen über Kalkskelete überhaupt"

(Sitzungsber. d. Wiener Akad. math.-nat. Cl. Bd. 95.
1. 1887. 55-146. t. I-IV
noticed by Steinmann in Neues Jahrbuch für
Mineralogie & 1890. I. 2. p. 371.)

Refers to paper by Sollas (see next sheet) -

Spicules of calcareous sponges are ^{simple} calcite crystals which differ from true
calcite crystals in the following points: -

- 1) - Want the external crystalline form -
- 2) - Have an imperfect cleavage -
- 3) - Soluble in caustic alkalies -
- 4) - Have low sp. gravity -
- 5) - Contain gas bubbles & fuse to dust on heating -

2 to 5 are explained by the presence of admixtures of other inorganic
substances which Na, Mg & SO₂ can be proved to be present -
(not isomorphous)

By a varying proportion of these admixtures the occurrence of a central
feather with lamination is explained -

Organic substance is not present in the needles - although they are
~~surrounded by it~~ enclosed in an organic sheath -

He would employ for these needles the name "Biocrystals"
proposed by ~~Haeckel~~ Haeckel and would propose the following
definition for them -

"The needles of the calcareous sponges consist ~~essentially~~ ^{principally}
of calcite - compound (mixed) crystals containing no organic
substance - whose external form which is wanting in crystal
faces, is determined by the specific activity of a living
organism, whose inner structure, although perfectly crystalline
~~is related~~ is related to its external form by a peculiar
disposition of the constituents."

& concluding refers to the skeletons of other groups of animals

and algae which separate out CaCO_3

In the latter (Corallina & Lithophyllum) ^{CaCO_3} is present in large amt. mixed in organic substance in such a manner that the optic axes ~~stand~~ stand at right angles to the surface of the membrane

He investigates the skeleton of Echinoderms after with older observations. Each individual piece ^(stick) has a ~~one~~ uniform optical orientation & represents probably a single crystal as can be proved by etching experiments on a needle of phosphoric. The Echinoderm skeleton appears to exactly resemble the calcareous sponges not only in their simple optically homogeneous formation but also in the absence of inorganic supports in the limestone mass.
(organic?)

Solas - W. J. : On the Physical Characters of Calcareous & Siliceous Sponges & Other Structures -
(Proc. Royal Dublin Soc. Vol. IV. pl. II. p. 374-392. 1885.)

Solas thinks it possible that the absence of the impure Forams. in the older geological formations may be due to the fact that their shells tests have an "aragonitic" composition.

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