

Hunt for Ceratites

(JAGD

NACH CERATITEN)

von

Rozaline K. Johnson und Dr. Hans Werner Rothe

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VERLAG DR. HANS WERNER ROTHE

HUNT FOR CERATITES

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After "Dear Bert," most of my letters to my husband, Lt. Col. Bertram H. Johnson, who preceded me to our new duty station in Frankfurt, Germany, continued with—"Have you located a Rock Club yet?" He told me that he did not think there were any amateur cutters, collectors, etc. as we had in America, only people such as those in Idar-Oberstein who were strictly professional and made their living by cutting stones as an art, a family tradition.

Arriving five months after my husband in Frankfurt, I started canvassing the jewelry stores, asking if they knew of an amateur Rock Club in town, and repeatedly got a "No" answer. Being bullheaded, as I am a Taurus, I continued my hunt, until one day I found a lovely shop that had mineral specimens, gemstone carvings, beads and jewelry in the window, and entered the shop. After speaking to the proprietor, he was happy to tell me that there was such a club in Frankfurt and that they met the first Wednesday in the month. With the address and telephone number of the acting President in hand, my husband and I, after making the proper arrangements, attended our first meeting and were delighted. The meetings consist of swapping, selling, lectures accompanied by colored slides, and discussions among the members of hunting locations and their finds. It was true that they did no tumbling, cabachon cutting or faceting, being limited in their private equipment; however, a few had saws and laps to saw and polish the surface of a mineral specimen, such as a lovely piece of agate, for a showcase or shelf. Many were fossil collectors, from whom we learned the Taunus Mountains, which are about a half hour ride from Frankfurt, contain many fossils from the Mesozoic Era, and that was my first love; however, my husband belongs to the school that loses



Fig. 1. Left to right: Mrs. B. H. Johnson, Dr. Hans Werner Rothe, and Lt. Col. B. H. Johnson.

interest in a stone if it cannot be cut and polished.

During the evening we became acquainted with a young Geology Student and his fiancée, and made an appointment for the following Sunday for them to show us a few of the nearby locations. We were off on our first Field Trip. Thru rain, snow and sunshine, we gathered some lovely Gypsum xls. at one site, then on to another, where we found Zinblend with Sphalerite, a few Qtz. xis. Barite and, Lo and behold, a few Brachiopods. My husband found a small (5/16" x 1") calcified something that looked like our Chinese dried shrimp, which we carefully wrapped and took to the next meeting for identification. There my story continues thru the words of Dr. Hans Werner Rothe, a member of the *Vereinigung der Freunde der Mineralogie u. Geologie*, and author of many articles and books, among them one on "Ceratites and the Ceratite Zones" Prof. Rothe continues:

"A small, very well preserved *Ceratites pulcher* (RIEDEL — exhibited during an Exchange Evening of the VFMG in Frankfurt/Main, decided both authors

to endeavor to collect this extinct animal species, and to make explorations. Since one of us owns a car and the other was acquainted with the site, we quickly agreed to make this trip together. From Frankfurt, we went to the first location south of Heidelberg, in Kreichgau, hilly country composed of shell lime, (Muschelkalk) between the Neckar and the Rhine Rivers.

Shell lime (medium Triassic) exists there in very large quantities. We visited small stone quarries opened up by road constructions, in Wiesloch, Baiertal, Schatthausen, near Sinsheim and Obergimpen, where the top layer of the shell lime formation was exposed. The geology, stratigraphy and palaeontology of this section are described in Rueger's "Geologischen Fuehrer durch Heidelbergs Umgebung" — Geological Guide to the surroundings of Heidelberg, in which many excavations sites are mentioned. The weather was not very kind. Rain and even a violent thunderstorm forced us back into the car. In spite of that, the yield of fossils was very large, as the upper stratum of shell lime here con-

tains many Vermes, Crinoidea, Brachio-poda and Gastropoda; among the Cephalopoda, the Ceratites were above all in a good state of preservation. The car had difficulty in hauling our many discoveries, as well as the clay and dirt on our shoes. (See photo No. 1 in "Steinbruch in Schatthausen").

A former great authority among German geologists, Leopold von Buch (1774-1853) desired, justifiably to have a Ceratite instead of the Eagle, as the animal on the German Coat of Arms, since Ceratites developed specifically in inner Germanic waters, which covered the greatest part of German soil 160 million years ago. Because this Germanic sea was only for a time connected with the Mediterranean Sea, the Tethys, an independent genetical development of these Cephalopodes took place in it. Of the Ammonite family, in the Germanic Triassic Era, there are alone, 60 different varieties of Ceratites, all of which are newly described in my monograph: "Die Ceratiten und die Ceratitenzonen des Oberen Muschelkalks (Trias) in Thueringer Becken" — The Ceratites and the

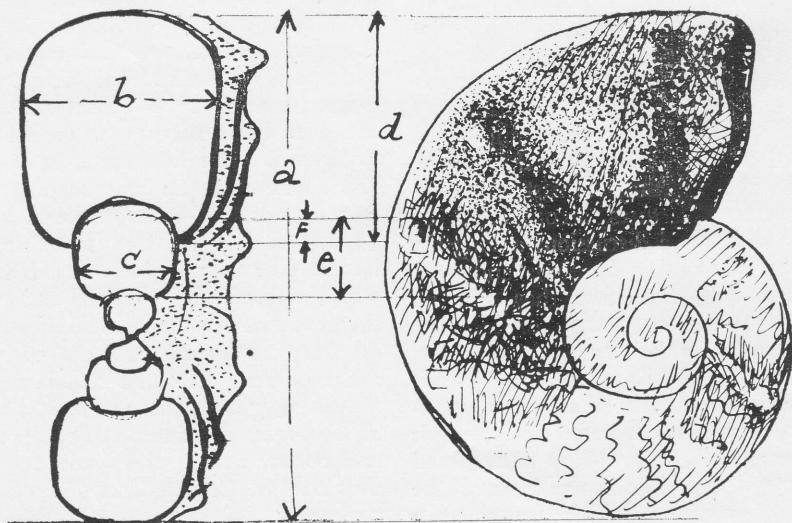


Fig. 2. Model for establishments of units of measurements.

Ceratite Zones of Upper Shell Lime (Triassic Era) in the basins of Thuringia" (for sale by the editor: Dr. Rothe). These Ceratites are exceptionally important in establishing stratigraphy of the upper part of the shell lime, — they are the guide fossils of the Ceratite layer. These 60 different varieties can be differentiated by their outer markings; illustration 2 shows how the individual measurements are obtained. One uses the diameter (Illustration 2a) the ratio of cross sections (Illustration d;b) the number of windings (d;e) the number of discs (d;e) the increase of thickness (b;c) and the involution (d;f) to identify the individual varieties. The cross section (open cut) in every case shows the sculpture on the housing case, that is, the development of the parts of the shell in which the animal existed. Because this front part of the shell contains no lobe lines, it is easy to distinguish from the ventricled parts. It is very easy to determine the group to which the Ceratite belongs, by referring to the identification table in my above-named book. After one has done that and ascertained the group name, one can immediately establish from the diagram shown in Illustration 3, which layer pocket of the upper shell lime one is dealing with. This diagram shows the appearance of the individual classes of Ceratites within these approximately 120 meter thick layers of the upper shell lime.

In conclusion, we have illustrated another of our numerous discoveries. It is a *Ceratitus pennendorfi solidus* Rothe of 15.5 cm (Illustration 4) from the middle Ceratite layer."

It can be readily seen that we were in good hands for our initiation into the circle of Fossil hunters in this part of Germany. Dr. Rothe has since taken us to several areas, one of which produced sand-balls housing pieces of tree limbs or seeds, also to Bundenbach and Gemunden where starfish, trilobites, sea-lillies, and if you are lucky a fish, are found in black slate. Unfortunately we have not been lucky enough to find any of the above as yet, but we will keep looking and hoping. Both authors will be happy to exchange Ceratites for other Triassic

Ammonites, however, as these specimen are comparatively heavy, arrangements should be concluded by mail before actual exchange takes place.

Editor's Note: Mrs. Johnson's address is — c/o Lt. Col. B. H. Johnson, USATC, APO 757, New York, N. Y.

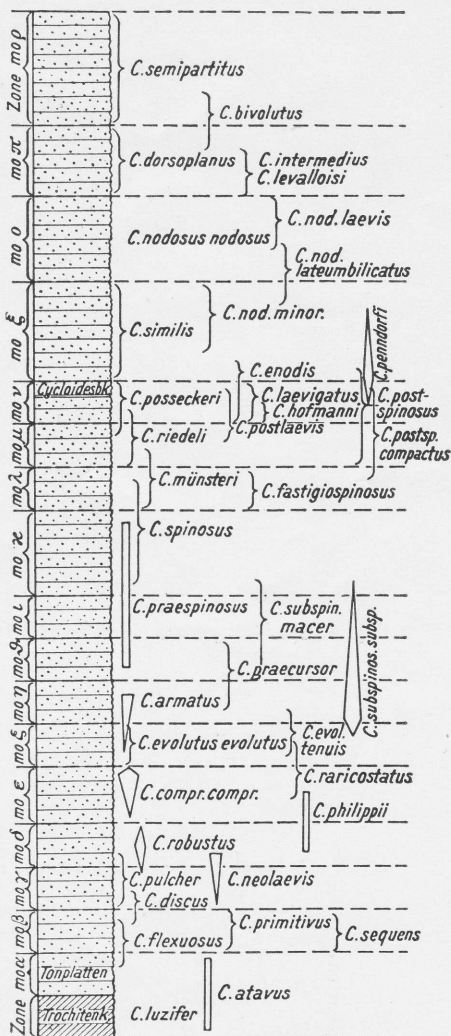


Abb. 3. Idealprofil der Ceratiten-Schichten

Fig. 3 - Profile of the Ceratite-Stratum



Fig. 4. *Ceratites penndorfi solidus* ROTHE 15.5 cm. large (Oberer Muschelkalk)

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