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A lectotype for *Cyathophora richardi* Michelin 1843

SHAAHIN ZAMAN¹ & BERNARD LATHUILIÈRE²

¹Paleontology and Geochemistry studies and researches department, Exploration Directorate of National Iranian Oil Company, first dead-end Alley, Seoul St., NE of Sheikh Bahaei Sq., 1994814695, Tehran, Iran. E-mail: shaahinzaman@yahoo.com

²Université de Lorraine, CNRS Laboratoire Géoressources, UMR 7566, Vandoeuvre-lès-Nancy, BP 239, F-54506, France. E-mail: bernard.lathuiliere@univ-lorraine.fr

Abstract

The figured syntype of *Cyathophora richardi* Michelin 1843, type species of the genus *Cyathophora* Michelin 1843, was recovered from the collection of the Muséum national d'Histoire naturelle (MNHN, Paris, France). It is herein designated as a lectotype in order to keep the traditional usage of the widely used genus *Cyathophora*.

Key words: Cyathophoridae, plocoid, Mesozoic

Introduction

The genus *Cyathophora* Michelin 1843 is a widely used nominal taxon known in Mesozoic with 39 Jurassic nominal species (Lathuilière 1989) and 27 Cretaceous nominal species (Löser 2000). The genus even served as the type for the family of Cyathophoridae Vaughan & Wells (1943). It was initially established by Michelin in 1843 with a brief Latin diagnosis and a figure (pl. 26, fig. 1a, b in Michelin 1843, reproduced in Fig. 1). The original text mentioned a single species in the genus and several localities for this species but did not mention the number of specimens in the type series. Milne-Edwards (1857) considered *Cyathophora richardi* Michelin 1843 synonym with *Cyathophora bourgueti* (Defrance 1826). Alloiteau (1948) described the characters of the genus *Cyathophora* Michelin 1843 based on a sample of *Cyathophora richardi* Michelin 1843 of the d'Orbigny collection no. 4567 (Muséum national d'Histoire naturelle, MNHN, Paris, France) from the commune of Tonnerre (Yonne, France). Roniewicz (1966) followed the diagnosis of Alloiteau and added extra characters to the diagnosis of this genus. These views on the genus appear taxonomically coherent and the name of *Cyathophora* was subsequently still used as such until the work of Pandey *et al.* (2002). Nevertheless, in order to clarify the nomenclatural situation, Löser (1994, 1998) undertook to revise the type material of *Cyathophora* Michelin 1843 held at the MNHN. Among the four specimens he found from the type series, two specimens were identified as *Stylina* and the two others were said to be poorly preserved. Consequently, he considered *Cyathophora* as *nomen dubium*. This position is also followed in Löser (2009).

Recovery of the illustrated syntype of *Cyathophora richardi* Michelin 1843

After studying the syntypes of *Cyathophora richardi* at the MNHN, we confirm that both specimens with the number M00071 belong to *Stylina* and the two others are badly preserved and cannot be studied or described precisely. In addition, a fifth specimen is now available in the collection under the number A32288 (Fig. 2). This specimen is the one originally illustrated by Michelin (1843). It is here designated as the lectotype of *Cyathophora richardi*, hence clarifying the status of *Cyathophora* Michelin 1843, and reconciling the nomenclatural situation of the genus with its most common usage.

Despite its imperfect preservation, the lectotype is coherent with the following new diagnosis of the genus:

Massive to ramose plocoid, occasionally cerioid corallum with corallites often separated by a narrow costate peritheca. Corallite circular to subpolygonal in outline. Costae non confluent to subconfluent. Extracalicular increase.

Conclusions

Based on this new diagnosis and on the observation of the type material, we consider *Cryptocoenia* (type species *A. alveolata*) as a junior synonym. We did not find the type material of *Cyathophora bourgueti* Defrance, but based on the variability already evaluated in the literature (Pandey *et al.* 2002) and following previous authors, we consider *Cyathophora richardi* as a junior synonym of *C. bourgueti*.

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