Progress report on the Middle Jurassic ammonite zones of Kachchh, W. India

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with 2 figures

Abstract. Intensive recent work on the classic as well as new Middle Jurassic outcrops in Kachchh (Cutch) has greatly improved precision and correlation of ammonoid zones and enlarged the stratigraphic record. (?) Leptosphinctes and Clydoniceras document (?) Upper Bajocian and late Middle-Upper Bathonian. Two Macrocephalitinae zones of SPATH are tentatively upheld: ((1) Macrocephalites triangularis zone, now placed in ? Upper Bathonian rather than basal Callovian and geographically extended to Madagascar, and (2) M. dimerus zone, basal Callovian. They are followed by the tentative new zones of (3) M. semilaevis ?, middle Lower Callovian, and (4) Subkossmatia opis, latest Lower Callovian. For the Middle Callovian, we retain SPATH’s informal designation (5) “Anceps Beds”, while in the Upper Callovian, the (6) Athleta Standard Zone (and Lamberti Standard Zone) can now be distinguished. Kachchh remains the principal source for East-Tethyan ammonoid biostratigraphy of the Middle and Upper Jurassic and deserves much additional field and laboratory work. This is a progress report of our own ongoing work.

Introduction

The Jurassic of Kachchh (alias Cutch, Kutch or Kachh) in Gujarat Province, western India, is famous for its rich invertebrate fauna, particularly the stratigraphically significant ammonoids which were studied mainly by SOWERBY (1840), WAAGEN (1873–75) and SPATH (1924, 1927–33). The Jurassic sediments, unconformably overlying the Precambrian basement, crop out in 3 east-west anticlinal ridges with the central one providing the best exposures (Fig. 1). Several scattered, blockfaulted and domally uplifted outcrops occur along the anticlinal ranges with the intervening depressions forming the Banni Plains, and bordered by the Little and Great Rann of Kachchh. The fault-bounded northern flanks are more steeply inclined while the southern flanks have gentle dips.

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