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# Ammonite, inoceramid and nannofossil biostratigraphy across the Turonian–Coniacian boundary in the Aquitaine and Vocontian basins (France) and Diego Basin (Madagascar)

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Detailed study of Turonian–Coniacian boundary sections in the Aquitaine Basin in southwestern France has yielded ammonites and inoceramids previously not reported from this basin. The ammonite *Forresteria petrocoriensis* (Coquand, 1859) occurs with inoceramids of the group of *Mytiloides incertus* (Jimbo, 1894), which confirms that this classical zonal index ammonite actually has its first occurrence in the upper Turonian as currently conceived. Calcareous nannofossils indicate Burnett et al.'s (1998) "standard" biozones UC9a to UC9c. In the Vocontian Basin, in southeastern France, *Prionocyclus germari* (Reuss, 1845) occurs with *Didymotis costatus* (Frič, 1893).

Collignon (1954) introduced an ammonite zonation for the Cretaceous of Madagascar, based on outcrops in the Menabe region (central western Madagascar), the Onilahy valley (southwestern Madagascar) and the Montagne des Français near Antsiranana (Diego Basin, northern Madagascar). However, this zonation, particularly that for the upper Turonian to Coniacian, suffers from many discrepancies and cannot be directly correlated with the "standard zonation".

The rock succession exposed in the Diego Basin was studied in detail and ammonites and inoceramids collected bed-by-bed. A rich ammonite fauna with *Prionocyclus germari* (Reuss, 1845), *Barroisiceras onilahyense* Basse, 1948, *Nostoceras (Eubostriochoceras) indopacificum* Matsumoto, 1967 and *Baculites yokoyamai* Tokunaga & Shimizu, 1926 was collected, together with inoceramids indicating the *Mytiloides incertus* Zone or the lower part of the *M. scupini* Zone. The ammonite fauna indicates the *Prionocyclus germari* Zone (introduced by Kaplan & Kennedy 1996 for northern Germany) and the presence also in northern Madagascar of Collignon's (1960) *Kossmaticeras theobaldi*–*Barroisiceras onilahyense* Zone. Calcareous nannofossils indicate Burnett et al.'s (1998) "standard" biozones UC9b to UC11b. The zonal scheme of Collignon is clearly in need of revision.

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