



New species of *Acasta* and *Balanus* (Balanoidea: Acastinae, Balaninae) from the Early Miocene (Burdigalian) of the Aquitaine Basin, France

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Abstract

Two new species of spiny barnacles (Balanoidea: Acastinae, Balaninae) are described from the lower Burdigalian (Early Miocene) of the Aquitaine Basin, southwest France. The first, *Acasta martillacensis* **sp. nov.**, from Martillac, is characterised by a shell with internal longitudinal ribs, a cellular space between the sheath and wall, a carinal sheath which adheres to the wall in the centre of its basal edge, a cup-shaped basis and a scutum with radial striae externally and a less than prominent adductor ridge internally. The second, *Balanus aculeatus* **sp. nov.**, from Saucats (Le Péloua), has paries exteriorly with strong, tubular spines. An overview of outcrops of Burdigalian strata in the area, within a palaeogeographic context, is added.

Key words: Cirripedia, Balanomorpha, Archaeobalanidae, Balanidae, *Acasta*, *Balanus*, taxonomy, new species, Miocene, Aquitaine Basin (France)

Résumé

Deux nouvelles espèces de balanes épineuses (Balanoidea: Acastinae, Balaninae) du Burdigalien inférieur (Miocène inférieur) du Bassin aquitain, Sud-Ouest de la France, sont décrites. La première, *Acasta martillacensis* **sp. nov.**, en provenance de Martillac, est caractérisée par un test avec des côtes longitudinales internes, un espace cloisonné entre la gaine et la muraille, une carène dont la gaine adhère à la muraille par le milieu de son bord basal, une base en forme de coupe, un scutum avec extérieurement des stries radiales et intérieurement une arête du muscle adducteur non proéminente. La seconde, *Balanus aculeatus* **sp. nov.**, en provenance de Saucats (Le Péloua), présente sur la face externe de sa paroi de fortes épines tubulaires. Une présentation des sites burdigaliens dans la région est ajoutée, dans un contexte paléogéographique.

Introduction

The Burdigalian Stage (upper Early Miocene, 20.43-15.97 Ma) was first described from the northern Aquitaine Basin, with the "Faluns de Léognan et de Saucats" as type formation for the lower portion of the stage (see e.g., Cahuzac *et al.* 1997; Cahuzac & Poignant 2005; Fig. 1 herein). Facies represented document inner platform depositional settings, and are often rich in littoral molluscan faunas, of a subtropical signature. At the very base of the Burdigalian Stage, a peculiar unit of regional extent occurs, the so-called "Sables à Mactres" (Mactrid Sands), the stratigraphy and palaeontology of which have been studied recently (Cahuzac & Poignant 2005; Lesport & Cahuzac 2005). This unit, accessible at Léognan and Martillac, has yielded a new species of spiny barnacle, *Acasta martillacensis* **sp. nov.**, described below. In addition, another new balanine, *Balanus aculeatus* **sp. nov.**, from Le Péloua at Saucats, is recorded. The present note forms part of an ongoing revision of Miocene barnacles from the Aquitaine Basin; Carriol (2000) and Carriol & Cahuzac (2001) have previously described the Concavinae.