



urn:lsid:zoobank.org:pub:DE003596-2416-4637-9FCD-085FC22BEEE0

Rare Late Cretaceous phymosomatoid echinoids from the Hannover area (Lower Saxony, Germany)*

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*In: Kroh, A. & Reich, M. (Eds.) Echinoderm Research 2010: Proceedings of the Seventh European Conference on Echinoderms, Göttingen, Germany, 2–9 October 2010. *Zoosymposia*, 7, xii+316 pp.

Abstract

Gauthieria mosae is recorded for the first time from upper Campanian (*Belemnitella minor*/*Nostoceras polyplocum* Zone) strata at the Teutonia Nord quarry in the Hannover area (northwest Germany), with two specimens available. This species was previously known only from the lower upper Campanian (*basiplana/spiniger* Zone and higher) of the province of Liège, northeast Belgium. In addition, a specimen of *Gauthieria* aff. *pseudoradiata*, from the *B. minor*/*N. polyplocum* Zone as well at the Teutonia Nord quarry, is illustrated and discussed in an attempt to elucidate the confused taxonomy of this form.

Key words: Echinoidea, Phymosomatidae, Cretaceous, Campanian, palaeogeography

Introduction

In recent decades, Upper Cretaceous rocks in the environs of Hannover, Lower Saxony (northwest Germany; Fig. 1) have yielded a wealth of regular and irregular echinoids. These species have been considered in numerous papers, both taxonomically and stratigraphically. For Late Cretaceous forms in general, reference is made to Ernst (1968, 1970a, 1970b, 1971a, 1971b, 1972, 1975), while Santonian faunas were described by Ernst (1973) and assemblages of Campanian age discussed and illustrated by Abu-Maaruf (1975), Schulz (1985), Niebuhr (1995) and Neumann *et al.* (2002). Specifically to the southeast of Hannover, at a number of large working quarries, highly fossiliferous from lower to upper Campanian strata (*Sphenoceramus lingua*/*Goniot euthis quadrata* Zone to *Belemnitella minor*/*Nostoceras polyplocum* Zone; see Niebuhr 1995, Niebuhr & Reich 2004 for details are accessible. These also include a wide array of echinoid taxa. Irregular echinoids in particular are very frequent (see Table 1); regulars are much less common (Table 2). The last, comprehensive, systematic treatment of Late Cretaceous phymosomatoid echinoid faunas from the area, and from northwest Germany in general, is that of Schlüter (1883). Only for northeast Germany, in the ‘Schreibkreide’ (White Chalk) of the Isle of Rügen (Vorpommern), are some more recent works available (Nestler 1966; Kutscher 1973, 1985a, 1985b, 1985c, 2003; Schlüter *et al.* 2012).