

Original article

Pennsylvanian (Late Carboniferous) calcareous microfossils from Cedro Peak (New Mexico, USA). Part 2: Smaller foraminifers and fusulinids

Microfossiles calcaires du Pennsylvanien (Carbonifère supérieur) de Cedro Peak (Nouveau Mexique, États-Unis). Seconde partie : petits foraminifères et fusulines

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Received 3 February 2012; accepted 20 August 2012

Available online 6 October 2012

Abstract

The Pennsylvanian stratigraphic section of the Manzanita Mountains (central New Mexico, USA) is restudied at Cedro Peak. This Pennsylvanian succession is divided into the Sandia Formation, Gray Mesa Fm, Atrasado Fm, and lower part of Bursum Fm. The sampled limestones of the Gray Mesa and Atrasado formations yielded three age-distinctive fossil assemblages: they are of (a) latest Atokan/early Desmoinesian, (b) late early Desmoinesian, and (c) middle Virgilian. The following new taxa of foraminifers are proposed: *Endoteboidea* n. superfam.; *Spireitlinidae* n. fam.; *Millerellinae* n. subfam.; *Pseudonovella marshalli* n. sp.; *Pseudonovella ohioicus* nom. nov.; *Pseudoacutella* n. gen.; *Pseudoacutella hoarei* nom. nov.; *Plectofusulina manzanensis* n. sp. Translated or emended names are: *Staffelloidea*, *Ozawainelloidea*, *Ozawainellidae*, and *Profusulinellidae*.

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Keywords: Pennsylvanian; Biostratigraphy; Taxonomy; Smaller Foraminifers; Fusulinids; New Mexico

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Résumé

À Cedro Peak (Manzanita Mountains, Nouveau Mexique) les formations pennsylvaniennes de Sandia, Gray Mesa, Atrasado et Bursum inférieure livrent trois associations de microfossiles datées respectivement de l'Atokien terminal/Desmoïnésien inférieur, de la partie supérieure du Desmoïnésien inférieur et du Virgilien moyen. Les foraminifères livrent les nouveaux taxa : *Endoteboidea* n. superfam., *Spireitlinidae* n. fam., *Millerellinae* n. subfam., *Pseudonovella marshalli* n. sp., *Pseudonovella ohioicus* nom. nov., *Pseudoacutella* n. gen., *Pseudoacutella hoarei* nom. nov. et *Plectofusulina manzanensis* n. sp. Les noms déplacés et amendés traduits ou corrigés sont *Staffelloidea*, *Ozawainelloidea*, *Ozawainellidae* et *Profusulinellidae*.

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Mots clés : Pennsylvanien ; Biostratigraphie ; Taxonomie ; Foraminifères ; Fusulines ; Nouveau Mexique

1. Introduction

Cedro Peak is an important Pennsylvanian outcrop in the northern Manzanita Mountains, Central New Mexico, USA (Fig. 1). Its Pennsylvanian series is composed of the Sandia Formation, the Gray Mesa Fm, the Atrasado Fm and the lower part of the Bursum Fm (Lucas et al., 2011; Figs. 2 and 3). Three sections of the Gray Mesa Fm (Y, Z, and ZZ) and three overlapping sections of the Atrasado Fm (A, B, and C) have been investigated. Their content in smaller foraminifers and

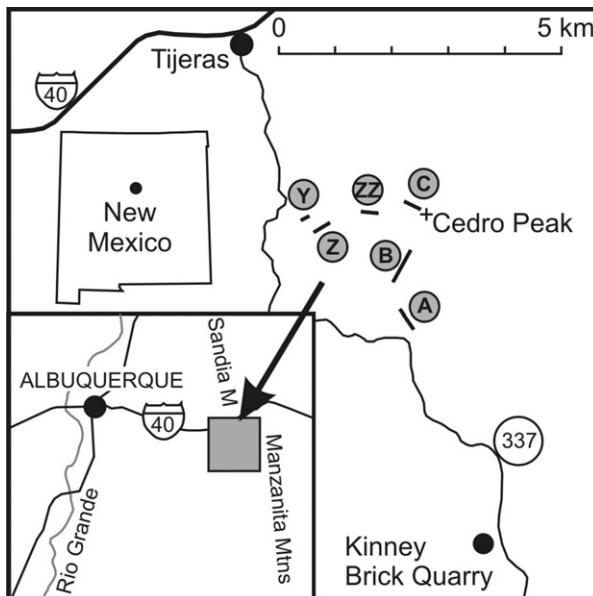


Fig. 1. Geological map of Cedro Peak in the Manzanita Mountains (New Mexico) showing locations of the Pennsylvanian sections: Y = Sandia Formation; Z and ZZ = Gray Mesa Formation; A, B and C = Atrasado Formation (Figs. 2 and 3). 40 and 337 = federal and secondary roads. Abbreviations: M = Mtns = Mountains.

Carte géologique du Cedro Peak dans les Manzanita Mountains (Nouveau Mexique) montrant la localisation des coupes du Pennsylvanien : Y = Formation Sandia ; Z et ZZ = Formation Gray Mesa ; A, B et C = Formation Atrasado (Fig. 2 et 3). 40 et 337 = routes fédérales et secondaires. Abréviations : M = Mtns = Mountains = Monts.

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