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Paracoskinolina praereicheli, a Special Kind of Tiny Marine Creature, Found in Ancient Rocks in SE France, Franco-Swiss Jura, and Swiss Pre-Alps During the Dinosaur Era

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Abstract In this study, we report the discovery of a novel microorganism, *Paracoskinolina praereicheli*, a diminutive species reminiscent of prehistoric fauna. This organism was identified within ancient geological formations dating back to the era of dinosaur predominance. Specifically, its presence has been noted in sedimentary rock layers located in Southeastern France, the Franco-Swiss Jura, and the Swiss Prealps. Our research provides a detailed description of *Paracoskinolina praereicheli*, encompassing its morphological characteristics and ecological context. The temporal focus of this study spans the Late Hauterivian to the Early Barremian periods, offering insights into the biodiversity and environmental conditions of these epochs. This discovery contributes significantly to our understanding of microorganism evolution and paleoecology during a critical phase in Earth's history.

Index Terms Bernard CLAVEL, Danielle DECROUEZ, Jean CHAROLLAIS, Robert BUSNARDO

I. Summary

Meet *Paracoskinolina praereicheli*, a unique creature that lived a long time ago during the dinosaur days. It's a bit like a small bug, and we found it in old rocks in SE France, Franco-Jura Switzerland, and the Swiss Prealps. This little critter tells us about the past during the Upper Hauterivian and Lower Barremian periods.

II. Introduction

Let's dive into something exciting – a new discovery! We've found a brand-new species that belongs to the *Paracoskinolina* family. This little creature, named "*Paracoskinoline praereicheli*," is extra special because it came before another similar one called "*P. reicheli*." We found a bunch of these creatures since 1990 in places like the Jura, the South-East of France, and the Swiss Pre-Alps [1].

III. Family and Type

Our new creature is part of the Orbitolinidae family, and it belongs to the *Paracoskilina* group. The original type species in this group is called *Coskinolina sunnilandensis*, discovered by someone named Maync in 1955. Our new creature, "*Paracoskinoline praereicheli*," is the star of the show in this study [2].

IV. About the Name

Why did we name it that way? Well, it's because we think this species came before another one called "*P. reicheli*," and we wanted to give a nod to someone named Guillaume [2].

V. Holotype - The Special One

The most special individual of this new species is called the holotype. It's like the VIP of our discovery. We found it in the Lower Barremian period in an area called Nicklesi. This VIP was collected in the Nant gorges in Vercors, France, and it's part of a sequence called Ba1. If you're curious, you can find it in the Natural History Museum of the City of Geneva [3].

VI. Materials We Used

To understand this new species better, we looked at 48 copies. Some were slices of rocks (thin sections), and others were polished sections. All of these are now kept safe in the Natural History Museum of the City of Geneva. So, there you have it – our journey into the world of a new creature, "*Paracoskinoline praereicheli*".

- Paquier-Cabu
- La Sarraz
- White Rock
- Mount Durand
- Nant Gorges
- La Béguère

- La Montagnette
- Rocher de Combau
- Pont de Laval
- Serre de Tourne
- as de Gras
- Orgon

VII. Axial and Subaxial Sections

The vertical sections of this species show structures quite similar to those of "*Paracoskinolina*" *reicheli* (Guillaume). Both species coexist from the summit of the Hauterivian. They share characteristics such as a trochospire with a three-quarter to one and a half turn, a simple embryonic apparatus, and cells in the rectilinear part that are slightly convex. The central zone occupies around 70 percent of the total diameter, with pillars at the ends, aligned or not, but never in a regular alternation. Apertural pores in the central zone are perpendicular to the box floor [4].

VIII. Tangential Sections

Cubicles in the marginal zone are vertically divided or not, depending on the section's position. They lack horizontal partitions, creating an irregular grid as they are slightly offset vertically from each other [5].

IX. Cross Sections

Transverse sections show oblique views intersecting the floor of multiple boxes. Pillars with irregular contours are observed, and certain sections indicate more primitive characters compared to "*P.*" *reicheli*, including a single secondary vertical partition [6].

X. Remarks

The classification of this species and "*P.*" *reicheli* within the *Paracoskinolina* Moullade genus is uncertain. The vertical alignment of partitions lacks the regularity seen in other species of the genus. Transitional forms toward "*Paracoskinolina*" *reicheli* are observed, characterized by sporadic horizontal partitions in both ancient and recent lodges.

XI. Stratigraphic Distribution

Upper Hauterivian

Sayni area (low-level procession of the Ha4 sequence)

Lower Barremian

Caillaudianus area (low-level procession of the Ba3 sequence)
 Geographic Distribution (Figure 1) Franco-Swiss Jura, SE of France Swiss Prealps [6]

XII. Deposition Medium

Representatives of this species are found in various platform facies.

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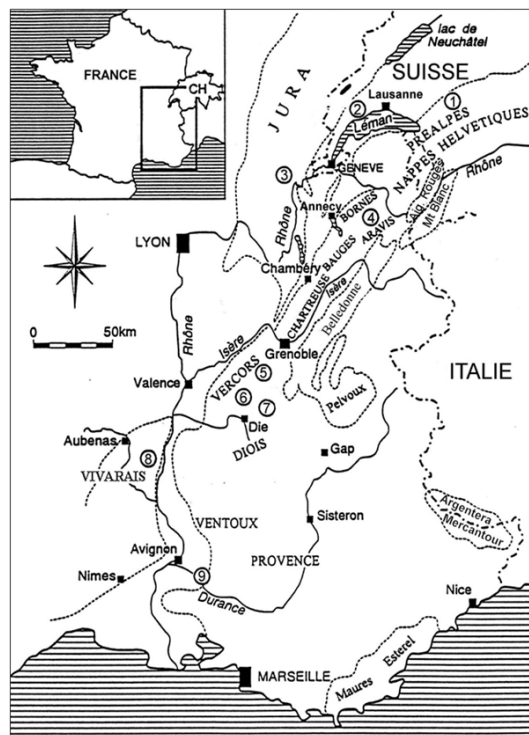


Figure 1: (Location Map of Localities.)

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