

PALEONTOLOGY. — On the dinosaurs of the Rognac and Vitrolles stages at the foot of Montagne-Noire. Note by Mr. **CHARLES DEPÉRET**.^{*}

“Our country, so privileged from the point of view of Tertiary mammal localities, is in contrast extremely poor in remains of the great terrestrial reptiles from the Secondary Era. Except for *Dimodosaurus* from the Triassic of Poligny and *Megalosaurus* from the Bathonian of Calvados, dinosaur remains can hardly be cited in France except those from the Rognac stage in Provence, described by Matheron under the names *Hypselosaurus priscus* and *Rhabdodon priscum*.

Also, it seems interesting to me to make known the existence of new dinosaur localities at the foot of Montagne-Noire, in the small *Saint-Chinian chain*, whose first indication I owe to my fellow-member and friend, Mr. Jean Miquel of Barroubio. The bones of terrestrial reptiles were found there at two different levels:

1st, a *lower horizon* at the base of the Rognac stage, in the wide, purplish-red sandstones known to geologists under the name *Saint-Chinian sandstones*, and which correspond feature for feature to the *reptile-bearing sandstones* of the middle part of the Rognac in Provence. Although bones of large size are rather frequent in these sandstones around the village of Saint-Chinian, so far I have not been able to extract a piece that permits a generic determination. I think that they are large sauropods, which will be interesting to be able to compare to *Hypselosaurus* from the reptile-bearing sandstones of the Aix Basin.

2nd, an *upper horizon* with dinosaurs, richer than the preceding one, exists within a band of red clays which surmount the Rognac *Lychnus*-bearing limestones and pass imperceptibly in their upper part into Lower Eocene marls and lacustrine limestones with *Physa prisca*. These glowing clay beds are identical in all points to the *Vitrolles clays* in the Aix Basin, whose connection with the Tertiary series, or in contrast with the subjacent Upper Cretaceous, has led to many controversies. The discovery of dinosaurs in these beds permits considering them definitively as Cretaceous (completely upper *Danian*).

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I have already obtained from this horizon a series of good elements that are referred to two very distinct genera of dinosaurs:

The first is a *sauropod* of large size; its solid and anteroposteriorly flat femur measures close to a meter in length. Moreover, I attribute to it some *strongly procoelous* caudal vertebrae that completely recall the type described under the name *Titanosaurus* Lydekker. This genus, still rather poorly known and perhaps very close to *Æpisaurus* Gervais from the green sandstone of Mont Ventoux, has a large geographic extension: Mr. Lydekker has cited it in the Upper Cretaceous of India, Patagonia, and in Europe from the Wealden of the Isle of Wight. I also had the occasion to indicate its presence in the Upper Cretaceous of the west coast of Madagascar; it is interesting to encounter it now in France.

The second type is a *theropod* predator of the family *Megalosauridae*. I have a mandibular fragment with a large tooth in place and the alveoli of several others. The tooth is of the form habitual to this family, in other words like a recurved saber blade with serrations on the two trenchant ridges. The arrangement of the serrations, which occupy the entire length of the anterior edge of the crown, leads me to think that this reptile differs rather notably from the Jurassic megalosaur, whose teeth are serrated anteriorly only in the upper third or half. In America, Marsh made known a reptile close to the megalosaur from the Upper Cretaceous of New Jersey, under the name *Dryptosaurus* (= *Laelaps* Cope), but in which the anterior edges of the teeth are finely serrated along their entire length. Thus it is to a species of this genus from the American Cretaceous that the predatory reptile from Montagne-Noire must be referred, while waiting for the time when its specific characters can be specified.

In reuniting the data furnished by Matheron's discoveries in Provence with the recent works made in Languedoc, as of now we know four different types of dinosaurs in the fluvio-terrestrial beds of the uppermost Cretaceous of southern France.

Two are *sauropods* (herbivores with solid bones) of the family *Morosauridae*, characterized by the procoelous disposition of their caudal vertebrae; there is on the one hand *Hypselosaurus* from Provence, recognizable by its dorsoventrally flattened caudal vertebrae; and on the other *Titanosaurus* from Languedoc, whose very strongly procoelous caudal vertebrae are transversely compressed.

A third type, *Dryptosaurus* from Montagne-Noire, is a *theropod* from the family *Megalosauridae*.

Finally, the fourth, *Rhabdodon* from Provence, is an ornithopod (herbivores with pneumatic bones) close to *Iguanodon*.

I hope that the methodical exploration that I intend to make in the Languedoc localities will soon augment the importance and interest of this curious fauna of great terrestrial reptiles, which survived in the south of France until the threshold of Tertiary times.”