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A disarticulated skeleton of a hybodont shark from the latest Jurassic of Thailand

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In 2019, a plaster containing clues of the presence of remains belonging to a single shark was removed from Phu Noi, a site located in Kalasin Province and belonging to the Phu Kradung Formation. Although its preparation proved to be challenging and has not yet being fully completed, the preliminary analysis of the specimen allows identifying a number of diagnostic characters justifying the erection of a new genus and species.

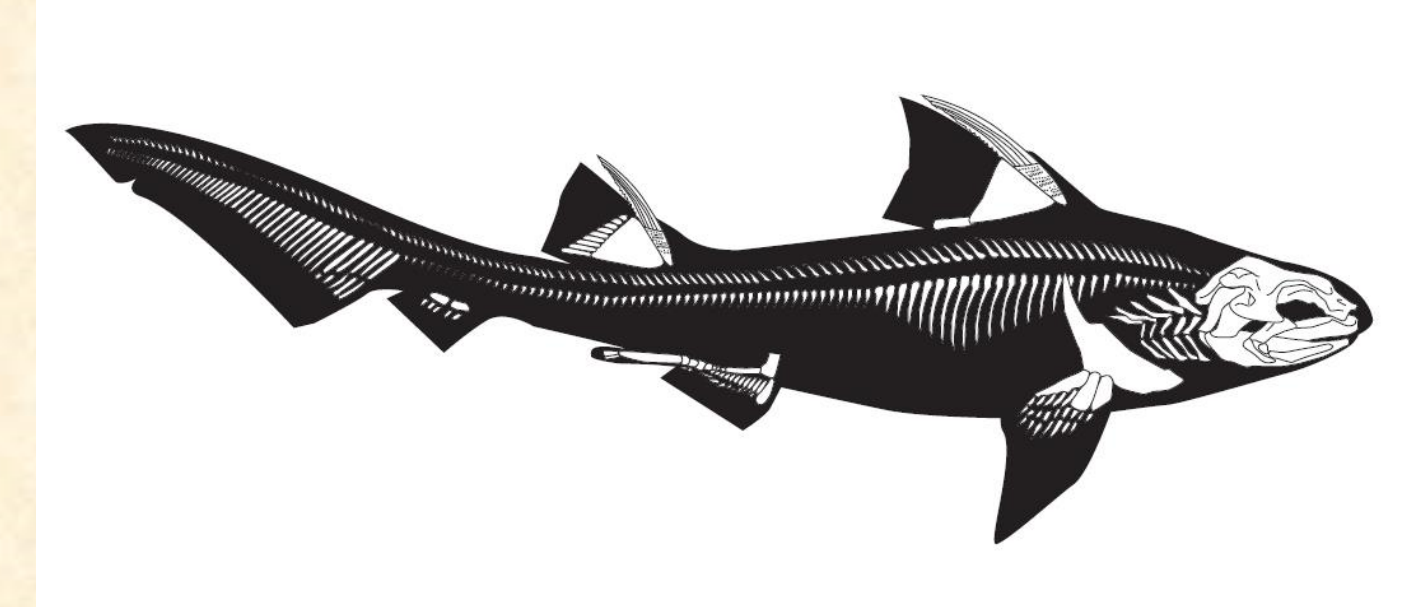
The plaster is held in the collection of the Palaeontological Research and Education Centre (PRC) of Maharakham University under field number PN 19-1. The specimen was prepared manually under a binocular microscope with needles and a small aircscribe and currently displays part of the head of the animal, including right and left meckel's cartilage, part of the right palatoquadrate, two labial cartilages and the anterior part of the neurocranium, one scapulocoracoid with part of a propterygium, one dorsal fin spine possibly associated with some neural arches as well as some patches of dermal denticles and scattered teeth.

Diagnostic characters of the new species may include an insertion area of the dorsal fin spine nearly as long as the ornamented part, the latter displaying coarse costae, a narrow scapulocoracoid with an elongated coracoid part tapering ventrally and dermal denticles displaying a broad triangular, ornamented crown.



Preparation of PN 19-1 at the PRC

Generalized skeleton of a hybodont shark



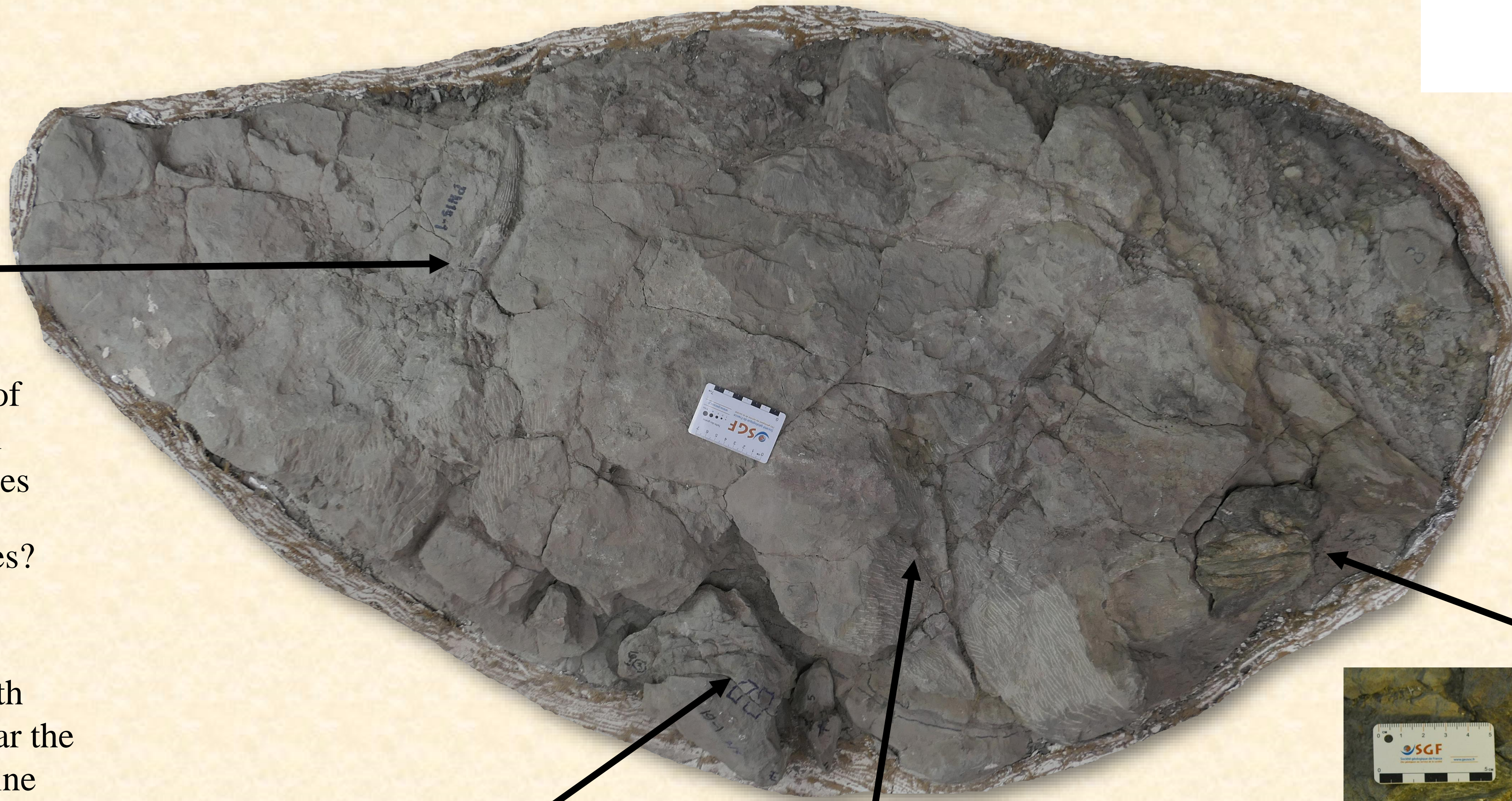
Dorsal fin spine



Patch of dermal denticles
Neural arches?



Posterior teeth displaced near the dorsal fin spine



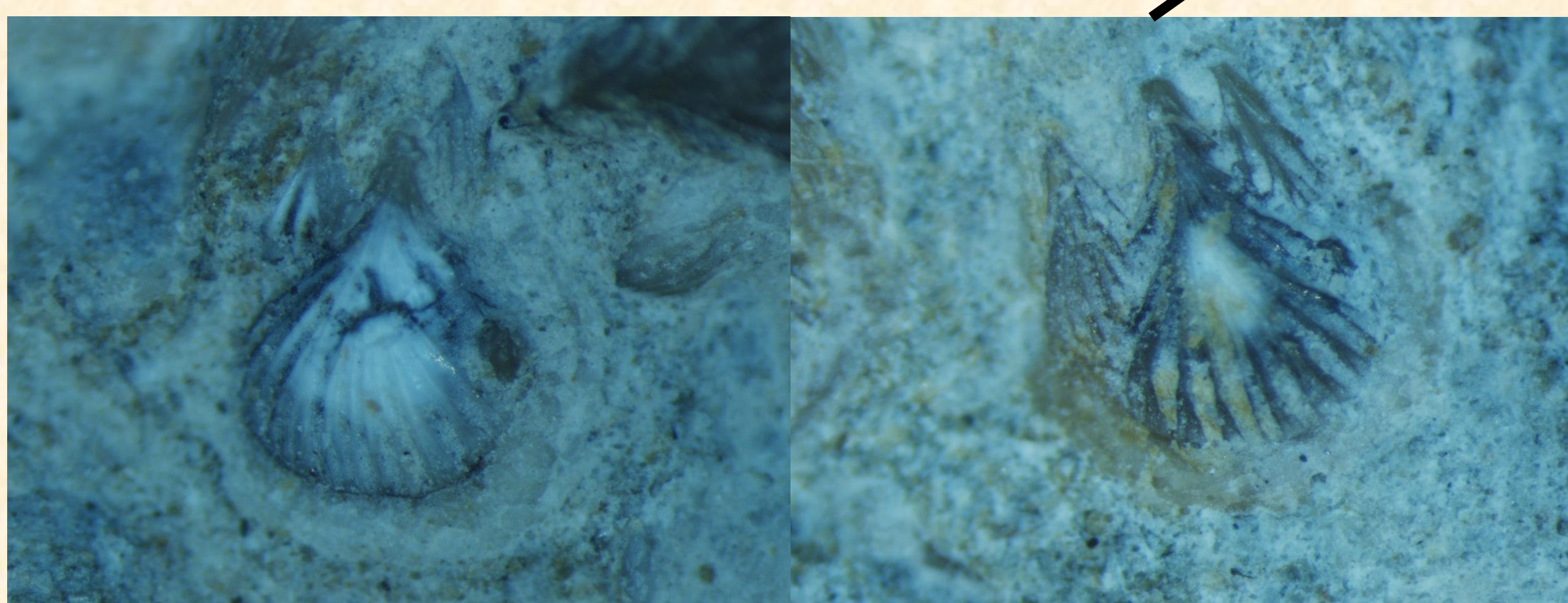
Patch of dermal denticles

Pectoral girdle

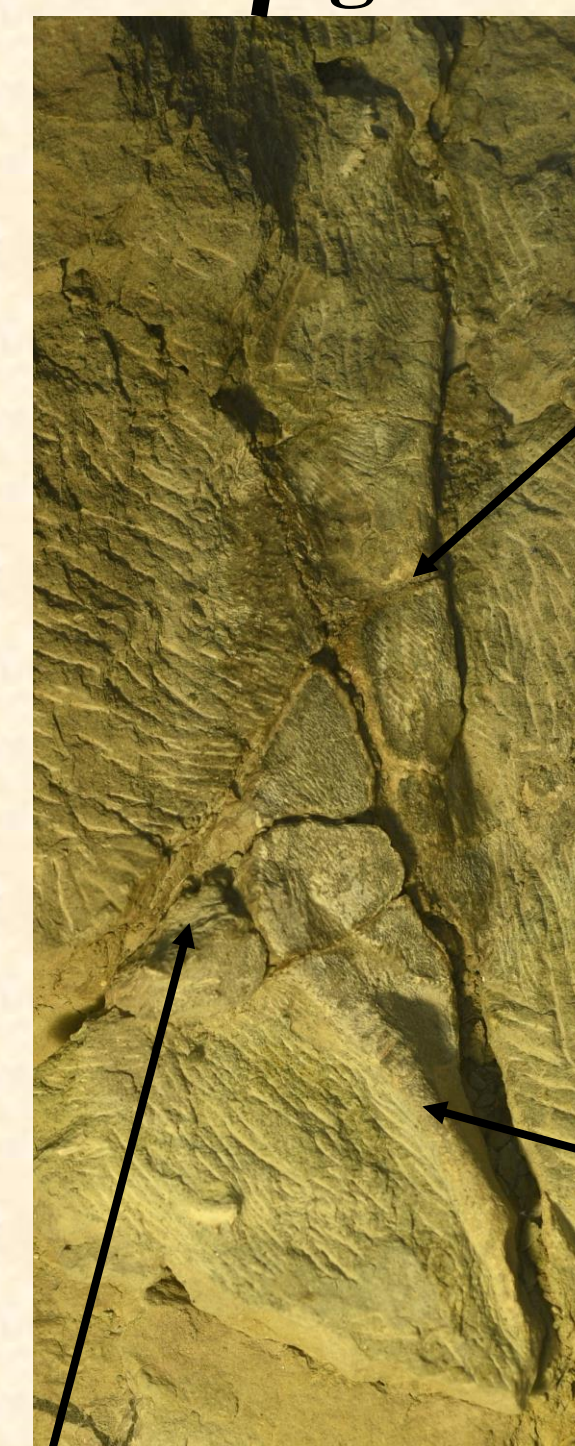
Skull



- 1: right etmopalatine process
- 2: right palatoquadrate
- 3: right Meckel's cartilage
- 4: left Meckel's cartilage
- 5: right anterior lower labial cartilage
- 6: right posterior lower labial cartilage



Dermal denticles in a patch of dermal denticles located on the ventral side of the animal. Some may display several crown on a single base.



Scapular blade

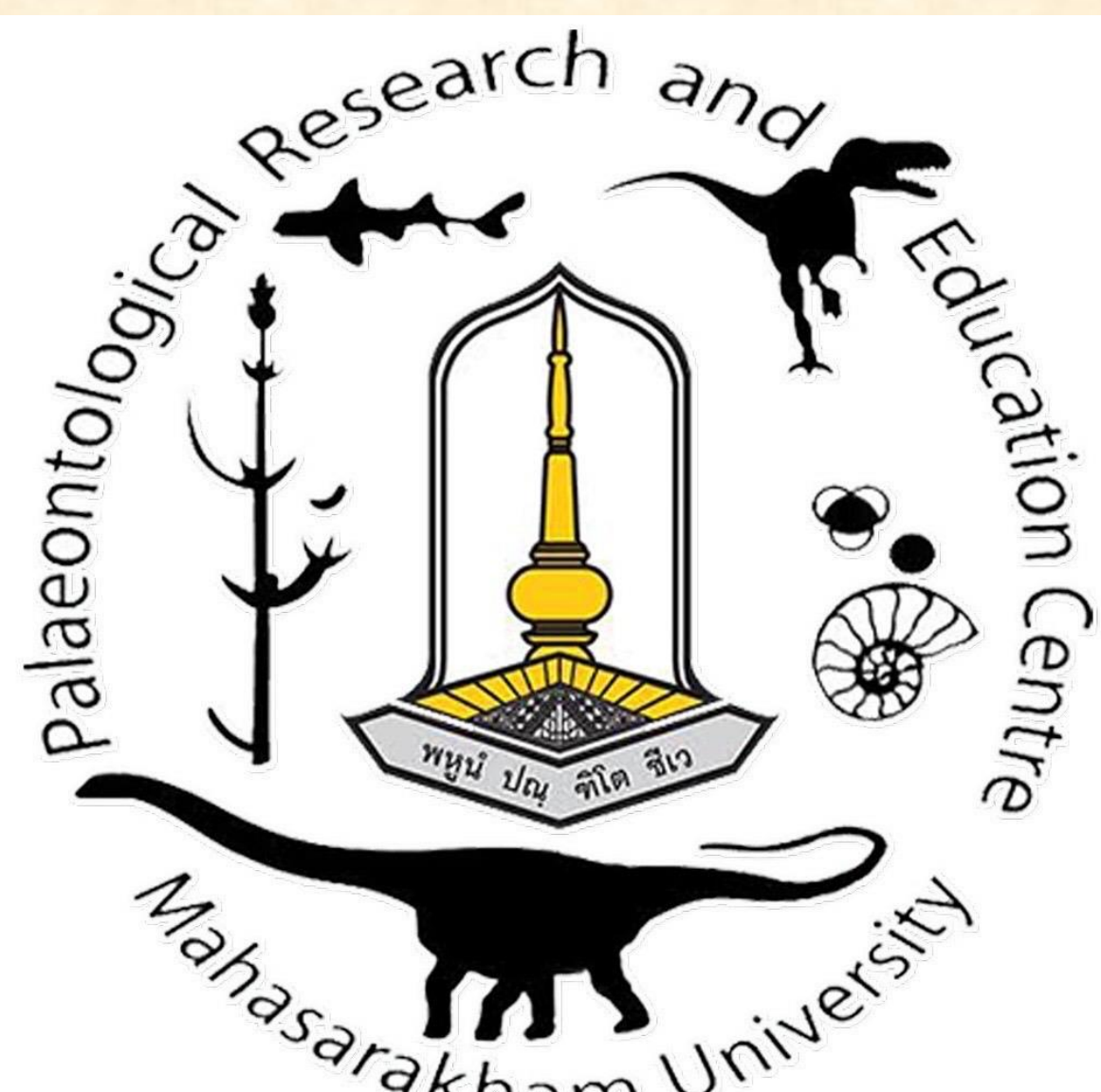
Slender coracoid part

Propterygium



Anterior teeth at the extremities of the Meckel's cartilages

Acknowledgements: We are grateful to Bouziane Khalloufi for his help photographing the specimen.



Lyon 1

