

# PALEOGEOGRAPHY AND SYSTEMATICS OF THE GENUS *DOGANIA* GRAY, 1844 (TESTUDINES: TRIONYCHIDAE).

[*Paleogeografía y sistemática del género Dogania Gray, 1844 (Testudines: Trionychidae).*]

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**RESUMEN:** Las placas óseas del género *Dogania* Gray, 1844 son muy significativas. Se conocen diversos restos fósiles que probablemente sean de este grupo, pero los únicos reconocidos como especie válida son los de *Dogania maortuensis* (Yeh, 1965). Este trabajo presenta el conocimiento de su historia reciente y distribución.

**Palabras clave:** *Dogania* (Testudines: Trionychidae), *Dogania maortuensis* (Yeh, 1965), Cretácico, *Dogania subplana* (Geoffroy, 1809), actual distribution.

**ABSTRACT:** The bony shells of the genus *Dogania* Gray, 1844 are well remarkable. Fossil remains probably by this group are known from the literature and *Dogania maortuensis* (Yeh, 1965) is the only hitherto known valid fossil species. A survey is given the known early history of distribution.

**Key words:** *Dogania* (Testudines: Trionychidae), *Dogania maortuensis* (Yeh, 1965), Cretaceous, *Dogania subplana* (Geoffroy, 1809), recent distribution.

**SYSTEMATICS OF THE GENUS *DOGANIA* GRAY, 1844**

The genus *Doganía* Gray, 1844 was redescribed based on shell characters by MEYLAN (1987) as members of the subtribe **Doganiina** with a complete series of nine neurals (first and second fused) which divide all of the pleurals along the midline. According SIEBENROCK (1902) and KARL (1997, 1998) is the feature of plastron that the *processus hyoplastrales medialís anterior* are absent. This character of *Doganía* is unit for the **Trionychinae** (Fig. 1).

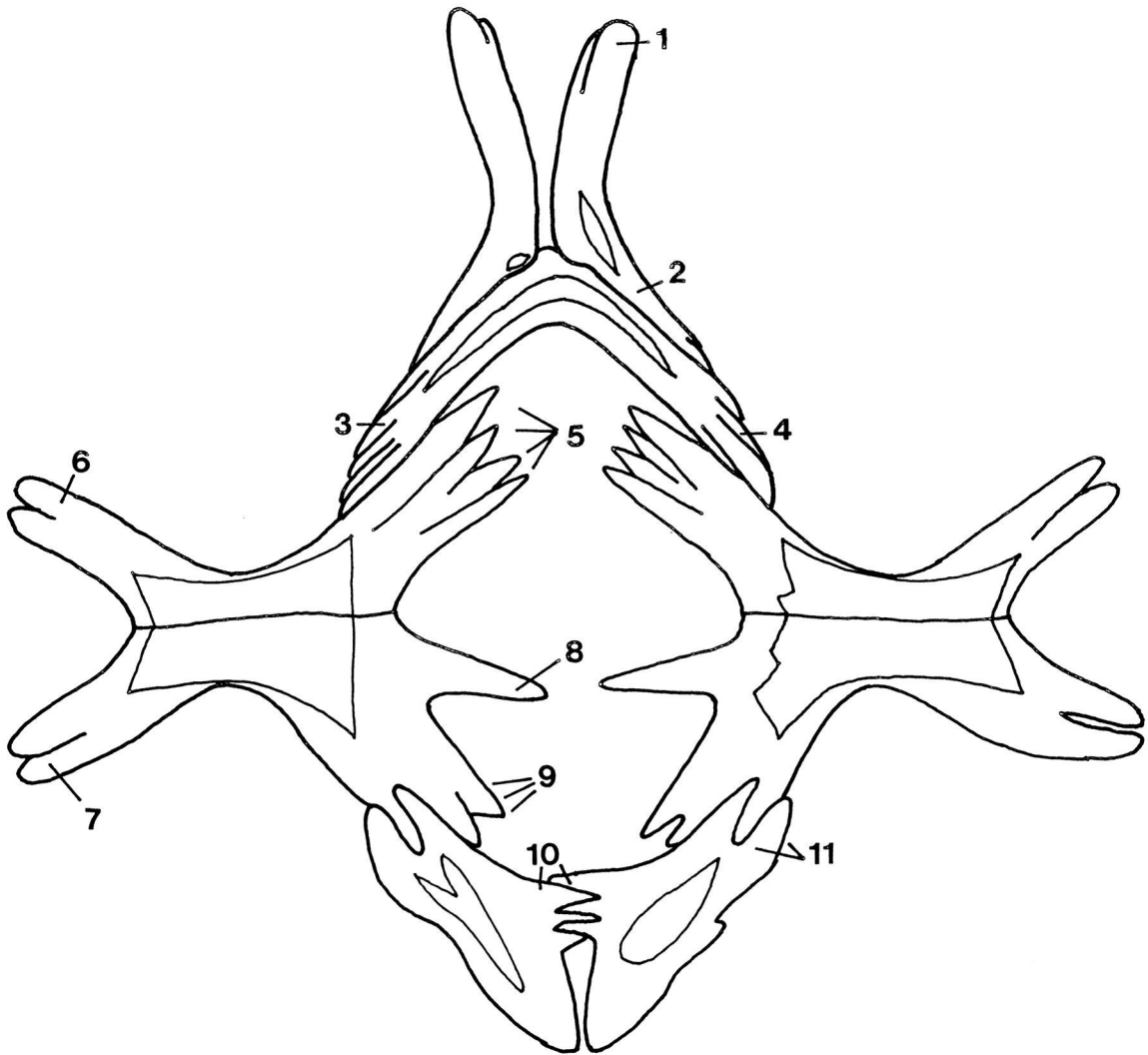


Figure 1: Terminology of the plastron of **Trionychinae** (example *Amyda cartilaginea* (Boddaert, 1770) according KARL (1997, 1998), 1- *Processus epiplastralis anterior*, 2- *Processus epiplastralis posterior*, 3- *Processus entoplastralis dexter* and 4- *sínister*, 5- *Processus hyoplastralis media*, 6 *Processus cardinus masculí anterior* and 7- *posterior*, 8- *Processus hyoplastralis medialís anterior* and 9- *posterior*, 10- *Processus xíphiplastralis media* and 11 - *anterior*.

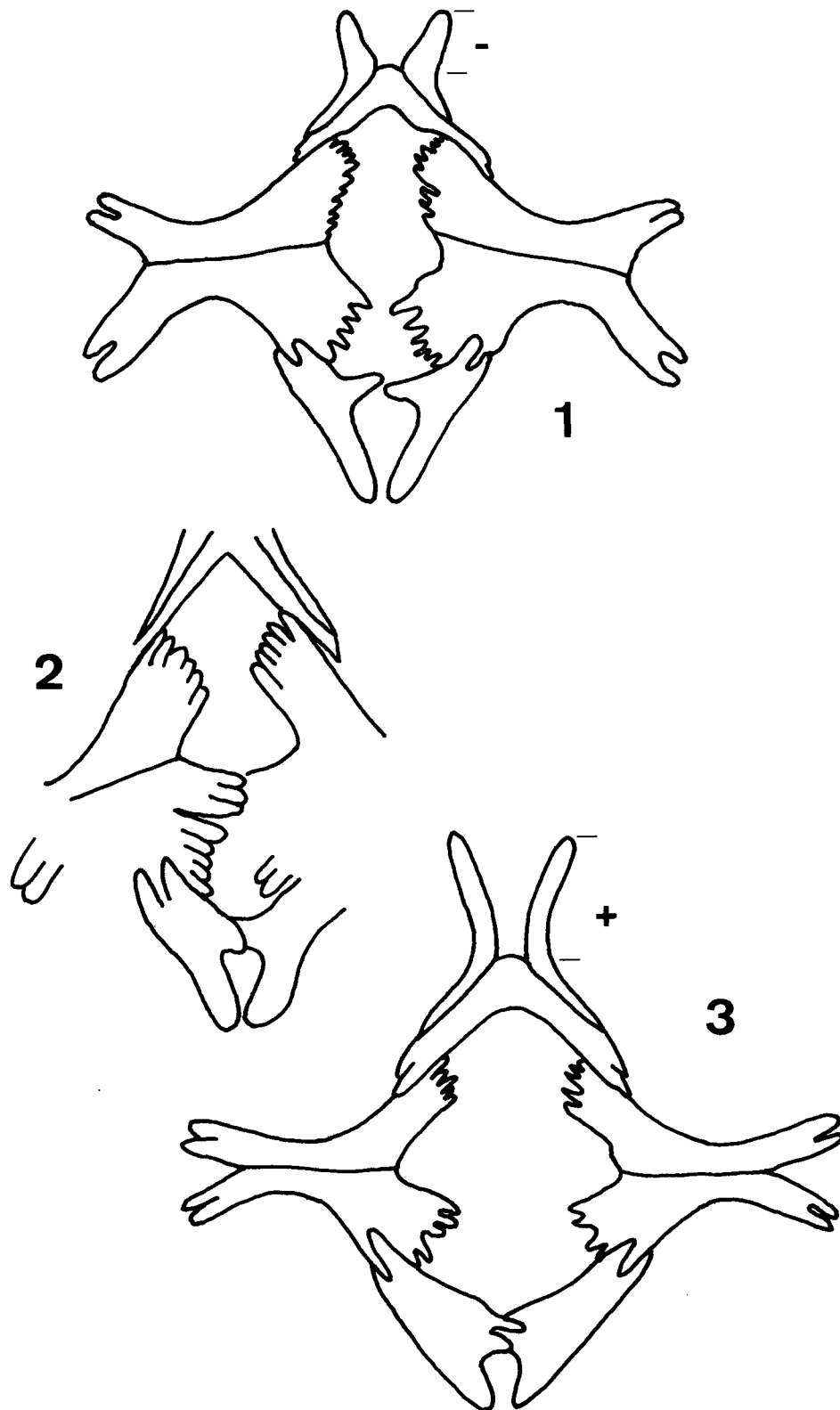


Figure 2: Differentiation of the plastron characters of the known *Dogania* species: 1- *Dogania maortuensis* (Yeh, 1965) from Kirghizia, 2- *Dogania maortuensis* (Yeh, 1965) from Mongolia, 3- *Dogania subplana* (Geoffroy Saint-Hillaire, 1809) rezent from Indonesia, according SIEBENROCK (1902), NESSOV (1986), YE (1994) and KARL (1997).

Fossil material of the same genus was origin describes as *Aspíderetes maortuensis* Yeh, 1965 (YE 1994) and *Dogania spec.* (*syn. Trionyx spec.* NESSOV, 1986), see KARL (1997). The original diagnosis of the first taxon includes characters of individual variation only. Clearly differences to the only recent species *Dogania subplana* (Geoffroy, 1809) (Fig. 2, 3+) are the very much shorter *processus epíplastralis anterior* (Fig. 2, 1-) and further probably only eight neurals in the fragmentary fossil materials. The summarize of the material from the Asiatic locality complexes in China, Mongolia and Kirghizia as samples of *Dogania maortuensis* (Yeh, 1965) is useful.

### GEOGRAPHIC AND STRATIGRAPHIC DISTRIBUTION

The distributions of recent populations of this genus are compiled by IVERSON (1992). In complete of these the Late Mesozoic or Cretaceous proofs are:

1. Dashukou, Maortu and Alxa in the Inner Mongolian Autonomous Region; Late Cretaceous, previously Early Cretaceous (according YE, 1994).
2. Kylodzhun (Klaudzin) in Kirghizia; Upper Albian, Late Early Cretaceous (according NESSOV 1986).

The stratigraphic and geographic distribution of the hitherto known specimens shows the distribution map (Fig. 3). These short results suggests that the area of the genus *Dogania* was in the late Mesozoic at the eastern part of the old Sino-Northamerican continental plate and is recently limited of some ranges in Southeast Asia. The paleoclimatic situation south of the 60° Northern latitude was temperate to subtropical. This latitude was the board between the Northern and Southern Laurasia flora (BRENNER, 1976; COX & MOORE, 1987), marked the northern board of the Mesozoic area of the genus *Dogania* and have probably stopped the migration to North America. After the collision of the Indian plate with Asia and lifting of the Himalayan and Central Asiatic plateau's, the landscape was very arid. In results of this environmental facts, the late Cretaceous and probably Early Paleogene populations of *Dogania* was extinct. The recent area of this genus is a relict area - the members of *Dogania* are true living fossil animals.

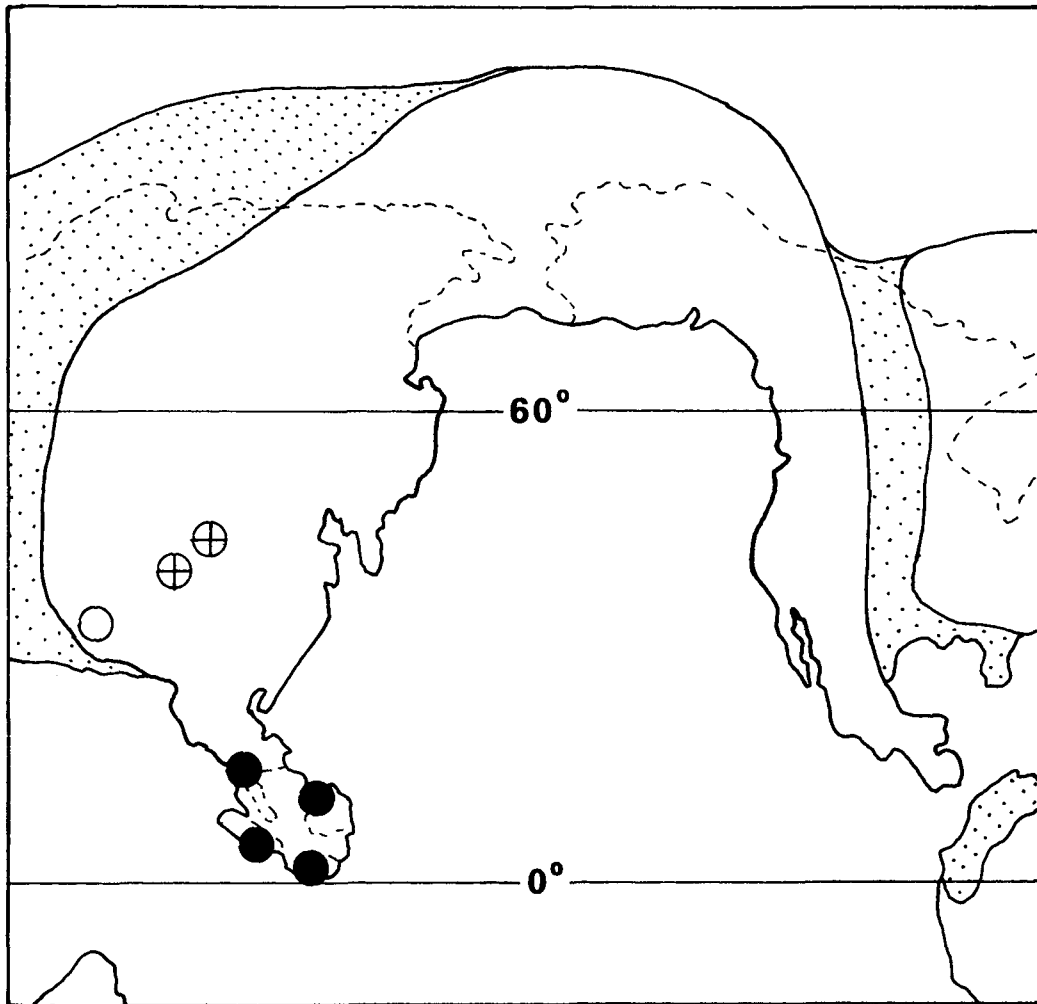


Figure 3: Distribution map with position of continents and oceans at the Upper Cretaceous, according various authors in new combination.

White point: Early Cretaceous of Kirghizia. Crossed points: Upper Cretaceous of Mongolia.  
Black points: recently distribution at Indonesia, according IVERSON (1992). White areas: continental masses. Pointed areas: fossil shelf areas.

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