雲南開遠小龍潭河頭煤系的時代

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雲南開遠小龍潭褐炭層的時代過去王竹泉、路兆洽、楊鍾健、卞美年曾定爲上新世(王、路1938; 楊、卞1939)。近年地質部雲南地質局小龍潭勘探隊在小龍潭煤田進行勘查將褐炭田地層定爲新第三紀，並劃分爲四層(剖面圖參看吳1958，本期39頁)，但每一層的確切時代沒有肯定:

河頭煤系	145米
泥灰岩	156米
小龍潭煤系	250米
東昇橋粘土砂礫層	100米

1956年在小龍潭煤系中曾發現 *Dryopithecus* (森林古猿)及 *Tetralophodon* (四稜齒象)等化石，經過鑑定後肯定其時代爲上新世初期，並認爲與印度下 Siwalik 系上部 (Chinji 層)的時代相當(吳1957; 周1957)。

1957年在河頭煤系中發現 *Rusa* (水鹿)屬的鹿角一個，因此對於河頭煤系時代進一步的確定提供了一些參考資料。

河頭煤系中發現的一個 *Rusa* 屬的角(圖1，見45頁)，保存大致完好，僅頂端分枝殘缺(地質部陳列館編號 Vm0027)。標本色黑，石化程度深。角粗壯，角面粗糙，橫切面呈圓形。角有3叉，眉枝直接從基節部上面伸出，與主枝形成 60° 銳角。主枝頂端成簡單的分叉。基節上面的主枝前後直徑爲 53mm，眉枝上面的主枝最大直徑爲 40mm，主枝基部到尖端分叉處的長度爲 215mm。

Rusa 從上新世晚期起曾分佈於歐亞大陸。到目前爲止最古老的 *Rusa* 曾發現於印度Siwalik系上部即相當於上新世晚期和更新世初期的地層中。*Rusa* 在歐洲到了更新世初期就絕滅了，但在亞洲的古北區和中國却長期保存下來，到了現代這一屬的鹿還分佈於東洋區的大部分地區，其分佈區域北面可達到中國四川。

河頭煤系中 *Rusa* 的一個角，除了體積較小以外，其他特徵還是比較接近於 *Rusa unicolor* 的角的。根據鹿角的特徵和石化程度，河頭煤系的時代可能爲上新世晚期或更新世初期。

本文承周明鎮教授在標本鑑定及地層問題上給予指導，謹致謝意。

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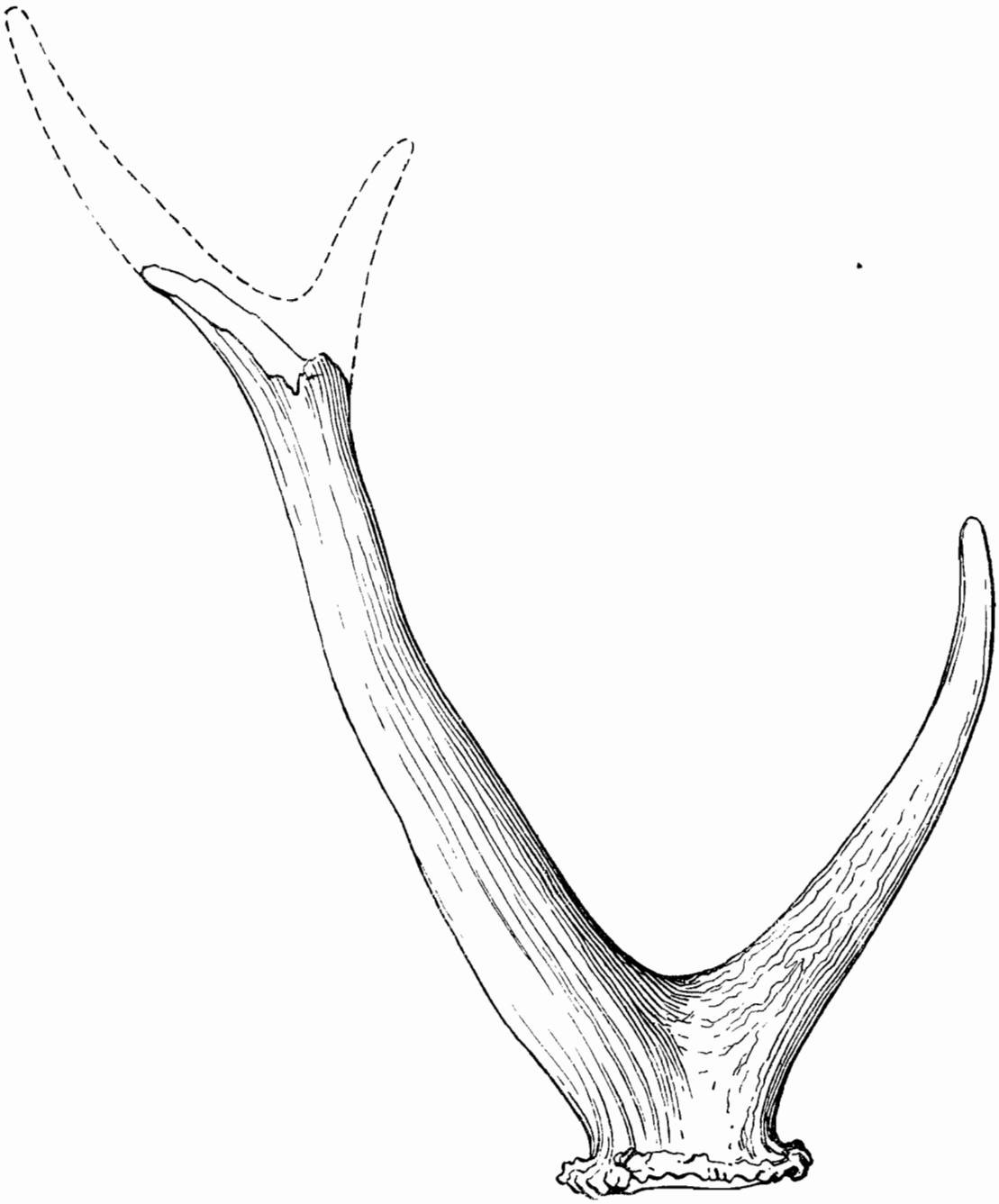

圖 1. *Rusa* sp. (水鹿)的右角,內前視 (× ½) *Rusa* sp. Right antler, anterior-internal view (× ½).

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ON THE AGE OF HO-TUO COAL SERIES, KEIYUAN, YUNNAN

(Summary)

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Two Coal Series are present in the lignite field of Hsiaolungtan, which is located at about 16 km. NW of Keiyuan Distrit, Yunnan. The lower one is called Hsiaolungtan Coal Series, the upper Hotuo Coal Series.

Since long the exact age of the two lignite deposits remained uncertain. The age of the lower one was later determined as Pliocene by Young and Bien, and was confirmed to be Pontien in 1957 by the discovery of several teeth of *Dryopithecus* and *Tetralophodon*. Recently the senior writer collected a rather well preserved antler of a rusine deer from Hotuo Coal Series. It furnishes further evidence regarding the age of Hotuo Coal Series.

The antler evidently belongs to a deer of *Rusa* group comparable to *R. unicolor* but smaller in size. It is stout and rugose, rounded in cross section, three-tined, with the brow tine forming a 60° angle with the beam.

Since *Rusa* the genus made its first appearance in the Upper Pliocene, therefore the age of the Hotou Series can hardly be older than the late Pliocene. According to the stratigraphical occurrenec of the fossil in the section about which the reader is referred to the preceding paper by Woo (p. 43), the Hotou Series is unconformably overlain by a series of gravels, sands, and clays of Quaternary age. Therefore the age of Hotou Coal Series is probably the Upper Pliocene.