

First fossil pods of genus *Mucuna* in legume family discovered in northern Vietnam

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First pod record of *Mucuna* (Papilionoideae, Fabaceae) from the late Miocene of the Yen Bai Basin, northern Vietnam. Credit: Hung Ba Nguyen

Mucuna is a pantropical genus with approximately 105 extant species of

climbing lianas (vines) and shrubs in the legume family (Fabaceae), the third-largest family of flowering plants. Although the genus *Mucuna* is well represented in modern tropical regions, fossil records of this genus are limited and hence relatively poorly studied.

In a study published in the *Review of Palaeobotany and Palynology*, researchers from the Xishuangbanna Tropical Botanical Garden (XTBG) of the Chinese Academy of Sciences and the Vietnam Academy of Science and Technology presented the newly-discovered and well-preserved fossil pods in one specimen from the late Miocene of the Yen Bai Basin, northern Vietnam.

The fossil specimen is characterized by linear-oblong, compressed, torulose, slightly curved pods containing at least three to five seeds, a pair of thickened marginal wings, and an apex with a cone-shaped beak. Based on extensive morphological observation and comparison of the morphology with extant genera in the Fabaceae, the researchers assigned the fossil pods to the genus *Mucuna*.

The fossil pods are morphologically similar to a living species in *Mucuna* subgenus *Macrocarpa*, namely *M. birdwoodiana*, which is endemic to China. Therefore, it might indicate a similar habitat along the Red River valley in the late Miocene.



Living *Mucuna* cf. *birdwoodiana*. Credit: Nature Museum

"To our current knowledge, the fossil pods from northern Vietnam are the first convincing macrofossil record for this [genus](#)," said Dr. Su Tao, principal investigator of the study.

Mucuna still survives and is widely distributed in northern Vietnam. "This indicates that *Mucuna* has existed in this region since the late Miocene," said Hung Ba Nguyen, a Vietnamese student pursuing Ph.D degree at XTBG.



M. macrocarpa blooming in Xishuangbanna Tropical Botanical Garden. Credit: XTBG

More information: Hung Ba Nguyen et al, First pod record of *Mucuna* (Papilionoideae, Fabaceae) from the late Miocene of the Yen Bai Basin, northern Vietnam, *Review of Palaeobotany and Palynology* (2021). [DOI: 10.1016/j.revpalbo.2021.104592](https://doi.org/10.1016/j.revpalbo.2021.104592)

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