

Hoya edeni (Apocynaceae: Asclepiadoideae): Notes on its overlooked first drawing, original material at CAL and etymology

Gopal Krishna, Avishek Bhattacharjee and K. Karthigeyan

Central National Herbarium, Botanical Survey of India, Howrah 711103
Corresponding author: karthigeyan.murthy@gmail.com

होया इडेनाई (एपोसायनेसी : एस्कलेपिएड्योडी) : पहले अनदेखे सचित्रण, केंद्रीय राष्ट्रीय पादपालय में संग्रहित मूल संग्रहण और इसके नामकरण पर टिप्पणी

गोपाल कृष्णा, अभिषेक भट्टाचार्य एवं के कार्थिगेयन

सारांश

प्रस्तुत शोध पत्र में होया इडेनाई किंग एक्स हुक. एफ के पहले अनदेखे सचित्रण इसके एक आइसोलेक्टोटाइप और इसके नामकरण से पूर्व ही केंद्रीय राष्ट्रीय पादपालय में सर जार्ज किंग के द्वारा संग्रहित किये गये 7 अन्य प्रतिरूपों के साथ इसके नामकरण पर टिप्पणी की गई है।

ABSTRACT

The overlooked first drawing of *Hoya edeni* King ex Hook.f., its one isoelectotype and seven more specimens collected by Sir George King before publishing the name have been traced at CAL. A note on its etymology is also provided.

Keywords: Archival drawing, Ashley Eden, Central National Herbarium, isoelectotype.

INTRODUCTION

The genus *Hoya* R. Br. belonging to family Apocynaceae, subfamily Asclepiadoideae with 350–450 species are distributed throughout tropical and subtropical Asia-Pacific region (Rodda, 2015; Rodda & al., 2019). The genus shows a varied range of habits, i.e. subshrubs or lianas, epiphytic or epilithic, often twining or climbing by adventitious roots, usually found in semi-evergreen to evergreen forests. Most of the species of *Hoya* are with very attractive and fragrant flowers.

The first drawing of *H. edeni* and its original material at CAL

While preparing a list of Old Archival Drawings housed at Central National Herbarium (CAL), we came across a drawing (Plate 1), wherein, the name of the plant was written as '*Hoya edeni*'. The drawing was most

probably prepared by a native (Indian) artist based on plants flowered in Sikkim in October 1875 at c. 1829 m elevation on trees (as epiphyte). *Hoya edeni* King ex Hook.f. (Plate 1, 2) has its native range of distribution in Nepal, India, Myanmar, China (Rodda, 2019), and in India it is distributed in Arunachal Pradesh, Manipur, Meghalaya, Sikkim and West Bengal (Jagtap & Singh, 1999). While describing the species Hooker (1883) credited Sir George King and cited the name as "**Hoya edeni**, King in *Herb. Hort. Calc.* *Centrostemma* sp., *Herb. Ind. Or. H.f. & T.*" and also cited a collection from Sikkim (SIKKIM HIMALAYA, alt. 3–6000 ft, *Herb. Griffith, J.D.H., &c.*" Rodda & al. (2019) designated a specimen from K (King 2587, K000873099, image!) as lectotype and some other specimens [*Griffith s.n.*, (Kew distr. No. 3777): K000873098, image!; K001045832, image!; K001045833, image! and *Hooker & Thomson*



Plate 1. The first drawing (restored) of *Hoya edeni* King ex Hook.f. preserved at CAL (© The Director, Botanical Survey of India).

s.n. (K)] as syntypes. However, Rodda erroneously wrote ‘isolectotype’ on the determinavit label pasted on the specimens ‘Griffith 5777’ preserved at K (K001045832 image!, K001045833, image!) which should be ‘syntype’. Furthermore, Rodda & al. (2019) did not mention anything about the actual isolectotype preserved at CAL (CAL0000033727!). Seven other specimens of *H. edeni* collected by King from Sikkim/erstwhile ‘Sikkim’ before publication of the name and the first drawing of *H. edeni* are also preserved at CAL. However, apart from the isolectotype (CAL0000033727!), we are not sure whether these seven other specimens at CAL are belonging to part of the original material of *H. edeni* or not because we don’t know whether these were available to Hooker prior to, or at the time of preparation of the description/diagnosis of *H. edeni*. The label-data of the designated lectotype (K000873099 image!) and isolectotype (CAL0000033727!) are almost matching with the data written on the CAL drawing. Further, the presence of the drawing number ‘75/50’ on ‘King 2587’ (K000873099, image!, CAL0000033727!) and also on the CAL drawing confirms that the drawing was prepared based on these specimens before publication of the name and therefore, this uncited CAL drawing is possibly the first drawing of *H. edeni*. The same number ‘75’ (but not ‘75/50’) is also written on another CAL specimen (CAL0000044501), but it lacks the King’s collection number ‘2587’. Two more specimens (CAL0000033730!, CAL00000337301!) collected by King from Mahalderam/Mahal Diram, Darjeeling district of West Bengal (erstwhile ‘Sikkim’) are also traced at CAL. These two specimens bear label data with same elevation, date and month of collection as that of the lectotype and CAL drawing, but devoid of King’s collection no. ‘2587’, the drawing number ‘75/50’ or ‘75’, and the year of collection is also different, i.e. 1876, not 1875 (may or may not be a typographical error). There is a chance that the lectotype, isolectotype and these three CAL specimens were collected from Mahalderam/ Mahal Diram, Darjeeling district of West Bengal (erstwhile ‘Sikkim’) on 5th October, 1875 at c. 1829 m elevation, but due to lack of any confirmed evidence we are not treating these three CAL specimens (CAL0000044501!, CAL0000033730!, CAL00000337301!) as isolectotypes of *H. edeni*. From the citation (“**H. Edeni**, *King in Herb. Hort. Calc.*) by Hooker (1883) and label-data of the King’s collections with the drawing number ‘75/50’ and ‘75’ it can also be concluded that Sir George King collected this species from Sikkim/erstwhile Sikkim and brought it to the then Royal Botanic Garden Calcutta (now Acharya Jagadish Chandra Bose Indian Botanic Garden, Howrah) for the purpose of introduction in the garden. The CAL drawing was prepared based on multiple specimens and probably one (K000873099, image!) of these specimens was sent to the Royal Botanic Gardens, Kew, which was

studied by Sir J.D. Hooker, before validating the species name proposed by King (on some herbarium specimens and also on the CAL drawing).

ETYMOLOGY

Naming a plant after a botanist or a famous person had been in tradition for centuries. Starting from Linnaeus, a number of species had been attributed to a person, who may or even sometimes may not be related to the field of botany. When we first checked the name on International Plant Names Index (IPNI), it appeared that the etymology of the specific epithet was coined after its place of collection, i.e., Sikkim (also known as “Garden of Eden of India”) as indicated on the drawing and since Eden is a mythical place, it was treated as a person (male) and therefore, no stem extension was needed, i.e., no second ‘i’ was needed. This was something unusual for a species named after a place to have single ‘i’ as ending. While naming a species with a place name, the usual practice was to end the species name with “-ensis” or “-ana” or “-ica”. But when we checked the protologue of *H. edeni*, we observed that the first word of the specific epithet was written in capital, i.e., as ‘Edeni’ which indicated that the species was named after a person, but it should be written as “Edenii”, ending with ‘ii’, when Latinized properly. Interestingly, before 1950, a number of species were named after persons’ names ending with ‘i’ instead of ‘ii’ and IPNI recorded these name as published without adding stem extension with an additional ‘i’ (Dr. K.N. Gandhi, pers. comm.). To understand the etymology better we corresponded with Dr. Henry Noltie and he said that the specific epithet ‘would have probably been named after the Governor General Lord Auckland, whose family name was Eden (as in the Eden Gardens, Kolkata)’.

Sir Ashley Eden (13 November 1831–8 July 1887) was an official (Lieutenant Governor of Bengal) and diplomat in British India. In 1860, Eden signed the Treaty of Tumlong with the Raja Sidkeong Namgyal, which secured protection to travelers and free trade. Moreover, he also contributed in making “the Eden canal” which connects the Ganges and the Tista, which was intended to supply water to Bihar and save it from famine. Possibly, Sir George King was impressed by the service rendered by Sir Eden and honoured him by naming a species after him. The generic name *Hoya* was given by Robert Brown in honour of Thomas Hoy (c. 1750–1.5.1822), an English gardener and botanist. Brown described Hoy as someone “whose merits as an intelligent and successful cultivator have been long known to the botanists of this country” (<https://casabio.org/taxa/hoya-carnosa>).



Plate 1. *Hoya edeni* King ex Hook.f.: a. Habit; b. Flowers; c. Close-up of a flower showing long, strongly reflexed corolla; d. Isolectotype at CAL (© The Director, Botanical Survey of India) (a–c. Photographs taken by G. Krishna at Neora Valley National Park, West Bengal).

TAXONOMIC TREATMENT

Hoya edeni King ex Hook.f., Fl. Brit. India 4: 53. 1883; H. Hara, Fl. E. Himalaya: 261. 1966; K.M. Matthew, Fl. Pl. Kurseong: 65. 1981; A.P. Jagtap & N.P. Singh, Fasc. Fl. India 24: 98. 1999; G.S. Giri & al., Mat. Fl. Arunachal Pradesh 2: 167. 2008; A.A. Mao & al., Checkl. Fl. Meghalaya: 116. 2016; Rodda & al. in Brittonia 71: 425. 2019.

Flowering and fruiting: April–December.

Distribution: INDIA: Arunachal Pradesh, Manipur, Meghalaya, Sikkim, West Bengal; CHINA; MYANMAR; NEPAL.

Specimens examined: INDIA, Arunachal Pradesh: West Kameng district, Foothills camp, ‘Sela Sub Agency’, 13.11.1951, G.K. Deka 41828 (ASSAM); Aka Hills, ‘Bomdila camp’ (Bomdila), 3000 m, 14.11.1951, G.K. Deka 41685 (ASSAM). Meghalaya: East Khasi Hills district, Shillong, July 1890, G. Mann s.n. (CAL, CAL0000035470!). Sikkim: East district, Singtam, c. 1219 m, 29.7.1906, Smith & Cave 260 (CAL); North district, Chungthang, c. 1524 m, 6.7.1909, Smith & Cave s.n. (CAL); Sikkim (or erstwhile ‘Sikkim’, now West Bengal?), without precise locality, 5.10.1875, c. 1829, G. King 2587 (K, K000873099; lectotype); Sikkim (or erstwhile ‘Sikkim’, now West Bengal?), without precise locality, 5.10.1875, c. 1829 m, G. King 2587 (CAL, CAL0000033727; isolectotype). West Bengal: Darjeeling district, Mahalderam, c. 1829 m, 5.10.1876, G. King s.n. (CAL, CAL0000033730!, CAL0000033731!); Rungbee, c. 1829 m, November 1877, G. King s.n. (CAL); Rungbee, c. 1829 m, November 1878, G. King s.n. (CAL, 3 specimens). West Bengal/Sikkim, without precise locality, September 1876, G. King s.n. (CAL0000044501!).

Note: This species can be readily identified in field by its hanging branches, light yellow to cream-coloured flowers,

strongly reflexed corolla, and also by its coronal lobes, which are shorter than the corolla tube. Description of the species is not provided here because the same is already available in detail in Jagtap & Singh (1999). Furthermore, our studied materials fit well with the description provided by Jagtap & Singh (1999) without exhibiting any additional variation.

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