



## *Jasminum albicalyx* Kobuski (Oleaceae): a new record from Vietnam

Bui Hong Quang<sup>1</sup>, Ritesh Kumar Choudhary<sup>2</sup>, Tran The Bach<sup>1,4</sup>, Vu Tien Chinh<sup>1</sup>,  
Nguyen Sinh Khang<sup>1</sup>, Changyoung Lee<sup>3</sup> and Joongku Lee<sup>3\*</sup>

<sup>1</sup>Department of Botany, Institute of Ecology and Biological Resources, Vietnam Academy of Sciences and Technology,  
18 Hoang Quoc Viet, Nghia Do, Cau Giay, Hanoi, Vietnam

<sup>2</sup>Agharkar Research Institute, Botany Group, G.G. Agarkar Road, Pune, India

<sup>3</sup>International Biological Material Research Center, Korea Research Institute of Bioscience and Biotechnology, Korea  
<sup>4</sup>Duy Tan University, K7/25 Quang Trung, Da Nang, Vietnam

(Received 6 August 2014; Accepted 4 September 2014)

## *Jasminum albicalyx* Kobuski: 베트남 미기록종

Bui Hong Quang<sup>1</sup> · Ritesh Kumar Choudhary<sup>2</sup> · Tran The Bach<sup>1,4</sup>  
Vu Tien Chinh<sup>1</sup> · Nguyen Sinh Khang<sup>1</sup> · 이창영<sup>3</sup> · 이종구<sup>3\*</sup>

<sup>1</sup>Institute of Ecology & Biological Resources, <sup>2</sup>Agharkar Research Institute,

<sup>3</sup>한국생명공학연구원 해외생물소재센터, <sup>4</sup>Duy Tan University.

**ABSTRACT:** We report a new record of *Jasminum albicalyx* Kobuski in Vietnam. The plant differs from *J. pedunculatum* Gagnep., a closely related taxon, by foliar and floral characters such as less number of lateral veins, presence of domatia at vein axils on the abaxial surface of leaf, smaller bracts, white calyx having more number of lobes and less number of lobes in corolla. Morphological description, line drawing and color photographs are provided in addition to the species key of allied species of *Jasminum albicalyx* in Vietnam.

**Keywords:** *Jasminum albicalyx*, New record, Vietnam, Oleaceae

**적 요:** 물푸레나무과의 *Jasminum albicalyx* Kobuski 를 베트남의 미기록종으로 보고한다. 본 종은 형태적으로 *J. pedunculatum* Gagnep.과 유사하지만 잎과 꽃의 형질에서 유사종과 비교할 때 측맥의 수가 적고 잎의 배면 엽맥에 돌출된 충낭(domatium)들이 있으며, 포의 크기가 작고, 흰색인 악열편의 수가 많으며, 화관열편의 수는 적은 점이 다르다. 형태학적 기재, 도해, 그리고 원색사진과 아울러 본종과 유사한 베트남의 *Jasminum* 속 식물의 검색표를 제시하였다.

**주요어:** *Jasminum albicalyx*, 미기록종, 베트남, 물푸레나무과

*Jasminum* L. is one of the largest genera in the family Oleaceae and is represented by about 200 species distributed in tropical and subtropical regions of South East Asia, Europe, Australia and Africa (Mabberley, 2008.). In Vietnam, the genus is represented by 32 species (Bui et al., 2013) and has been

studied taxonomically by several authors (Kobuski, 1939; Pham, 2000; Tran, 2003). During a floristic expedition to Bat Dai Son Natural Reserve in Ha Giang province of North Vietnam, an interesting species of *Jasminum* was encountered. After a thorough scrutiny of the available literature (Gagnepain, 1933; Chang et al., 1996; Pham, 2000; Tran, 2003) and study of the type specimens, it was identified as *J. albicalyx* Kobuski, hitherto unreported from Vietnam. So far, this species was reported only from the Guangxi province of China (Chang et al., 1996). This species is morphologically most similar to *J.*

\*Author for correspondence: joongku@kribb.re.kr

*pedunculatum* Gagnep., in having unifoliate, coriaceous leaves and inflorescence congested in heads, cymose with 3-5 flowers. However, this species can be differentiated from the said species in having lesser number of lateral veins, presence of domatia at vein axils on the abaxial surface of leaf, smaller bracts, white calyx having more number of lobes and less number of lobes in corolla.

### Taxonomic description

*Jasminum albicalyx* Kobuski, J. Arnold Arbor. 20: 64. 1939; Chang et al. in Wu & Raven (eds.), Fl. China 15: 315, 1996. (Figs. 1 & 2)

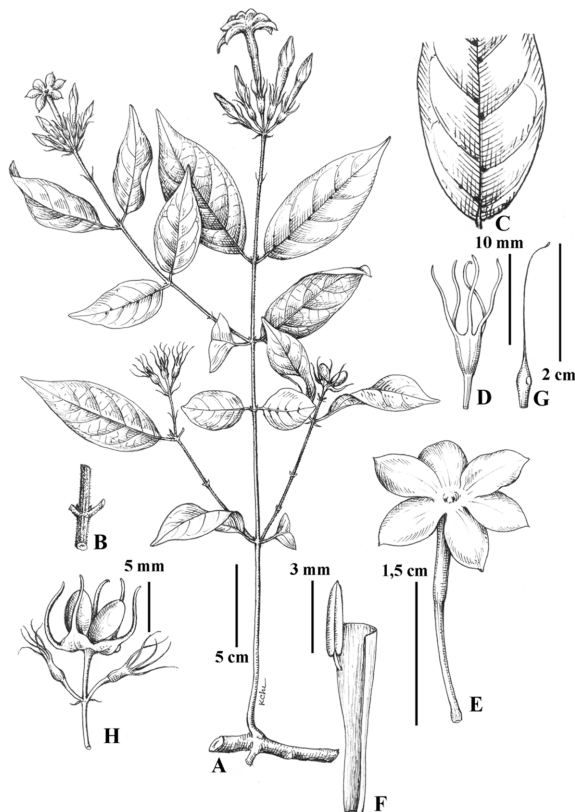
TYPE: CHINA. Ch'ang An, Yung Hsien forests, 200 m, Oct. 23, 1933 A.N. Steward & H.C. Cheo, 1172. (holotype: A(Photo!); isotype: S, NY, BM).

Shrubs, upto 3 m long. Branchlets terete, innovations pubescent. Leaves opposite, simple; petiole 5-6 mm long, pubescent; blade ovate- elliptic, 3-9(-11) × 3-5 cm, chartaceous, base cuneate to rounded, apex shortly acuminate, lower surface

with domatia at vein axils; primary veins 3-5 on each side of midrib, slightly raised above, obscure below; dark green above, pale green below. Inflorescence congested in heads, terminal or sometimes axillary, pubescent or glabrous, with 3-5 flowers; bracts linear, ca. 3-4(-11) mm long, glabrous. Pedicel 2-3 cm long, pubescent or glabrous. Calyx campanulate, white, pubescent or glabrous; tube 3-4 mm long; lobes 5-6, filiform 4-10(-12) mm long, pubescent or glabrous. Corolla, tube 1.5-2 cm long, pale white, 5-6 lobes, white, ovate, 5-10 × 4-5 mm, apex acute to shortly acuminate. Stamens 2; filaments 0.5-1 mm long, glabrous. Anthers 2-3 mm long, with acute connective appendage. Ovary elliptic, 0.2-0.5 mm, glabrous; style 1-1.5 cm long, glabrous; stigma ca. 4 mm long, glabrous; ovules 2. Fruits 1-lobed, greenish, ellipsoid, 0.6-1 × 4-10 mm. Flowering and fruiting, Nov.-Feb. Elevation: 300-400 m.

**Distribution:** China (Guangxi) and Vietnam: Ha Giang Province, Quan Ba District and Phu Tho Province, Tan Son District (Fig. 3).

**Specimens examined:** Vietnam, Ha Giang Province: Quan Ba district, N.S. Khang et al. CPC- 4624 (HN!); Phu Tho, Xuan Son & V.X. Phuong 4048 (HN!). China, Guangxi (Zhuang Autonomous Region Longzhou county, Lane Nature Reserve



**Fig. 1.** *Jasminum albicalyx* Kobuski A. Flowering twig; B. Stem; C. Abaxial portion of leaf showing domatia on the vein axils; D. Calyx; E. Flower; F. Dissected corolla tube and anther; G. Pistil; H. Fruiting twig. [Drawn by Mrs. Kim Chi, from CPC 4624; V. X. Phuong 4048 (HN)]



**Fig. 2.** *Jasminum albicalyx* Kobuski A. Habit; B. Abaxial portion of leaf showing domatium on the vein axils; C. Calyx; D. Inflorescence; E. Flower. (Photos by Nguyen Sinh Khang)

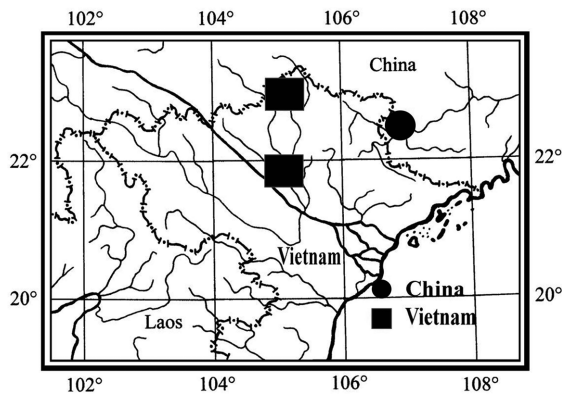


Fig. 3. Distribution map of *Jasminum albicalyx* Kobuski showing its localities in Vietnam and China.

Table 1. Morphological comparison of *Jasminum albicalyx* with its closest ally.

Morphological characters	<i>J. albicalyx</i>	<i>J. pedunculatum</i>
Leaf	lateral veins 3-5; domatia present abaxially on the vein axils	lateral veins 4-6; domatia absent
Bracts	linear, 3-4(-11) mm long, glabrous	linear or lanceolate, 10-12(-16) mm long, pubescent
Calyx lobes	4 -10(-12) mm long, pubescent or glabrous, white	3.5- 6(-8) mm long, pubescent, green
Corolla	lobes 5-6, ovate or lanceolate, 5-10 × 4-6mm	lobes 7-8, oblong or lanceolate, 5-7 × 2-3mm

in Gansu Swiss Post) *W.Y.Chun 104933* (IBSC Photo!); *13068* (IBSC-Photo!); *13236* (IBSC-Photo!); *11630* (IBSC-Photo!); *11855* (IBSC-Photo!).

**Key to the known allied taxa of *Jasminum albicalyx* from Vietnam**

- 1. Calyx lobes equal to or longer than calyx tube .....*J. scandens*
- 1. Calyx lobes shorter than tube
  - 2. Bracts leafy, basal ovate, subulate or lanceolate, dense .....*J. laxiflorum*
  - 2. Bracts linear or lanceolate, pubescent or glabrous
    - 3. Inflorescence cymes -corymbose, axillary, 5-15 flowered ..... *J. nervosum*
    - 3. Inflorescences cymes, 3-5-flowered
      - 4. Bracts linear or lanceolate, 10-12(-16) mm long, pubescent; calyx lobes 3.5-6(-8) mm long, pubescent,

- white; corolla 7-8 lobed ..... *J. pedunculatum*
- 4. Bracts linear, 3-4(-11) mm long, glabrous; calyx lobes 4 -10(-12) mm long, pubescent or glabrous; corolla 5-6 lobed ..... *J. albicalyx*

**Notes:** *J. albicalyx* appears to be a threatened plant in Vietnam because of its restricted distribution though proper survey work is required to know its real population status. The plant also has ornamental potential because of its beautiful flowers.

**Acknowledgment**

We are thankful to the authorities of Institute of Ecology and Biological Resources (IEBR), Vietnam Academy of Science and Technology, Hanoi (VAST) for permitting us to carry out this study. This research was funded by Vietnam National Foundation for Science and Technology Development (NAFOSTED) under grant number 106.11-2012.37 and project on Bio-prospecting on Biological Materials of Vietnam. We also express our sincere thanks to Dr Nguyen Tien Hiep, Director, CPC for encouragements. Thanks are also due to the curators of the herbaria HN and IBSC.

**Literature Cited**

Chang, M. C., L.-C. Chiu, Z. Wei and P. S. Green. 1996. Oleaceae. In *Flora of China*. Vol. 15. Wu, Z.-Y. and P. H. Raven (eds.), Science Press, Beijing and Missouri Botanical Garden Press, St. Louis, USA Pp. 307-319.

Bui, H. Q., T. T. Bach, R. K. Choudhary, V. T. Chinh, D. V. Hai, S. H. Park, and J. Lee. 2013. *Jasminum extensum* Wall. ex G. Don (Oleaceae), a new record to the Flora of Vietnam. *Taiwania* 58 (2): 128-131.

Gagnepain, F. 1933. Oleaceae. In *Flore Générale de L'Indochine* Vol. 3. Lecomte H., Paris. Pp. 1034-1059.

Pham, H. H. 2000. An Illustrated Flora of Vietnam Vol. 2, Ho Chi Minh Young Publishing House, Hanoi. Pp. 891-890.

Tran, D. L. 2003. Oleaceae In *Checklist of Plant Species of Vietnam* Vol. 2, Nguyen, T. B. (ed.) Agricultural Publishing House, Hanoi. Pp. 1162-1166.

Kobuski, C. E. 1939. New and noteworthy species of Asiatic *Jasminum*. *Journal of the Arnold Arboretum* 20: 64.

Mabberley, D. J. 2008. *Mabberley's Plant-Book: a Portable Dictionary of Plants, their Classification and Uses*. Cambridge University Press, England.