

## ***Aucuba robusta* W. P. Fang & T. P. Soong (Aucubaceae): A NEW RECORD TO THE FLORA OF VIETNAM**

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### SUMMARY

Aucubaceae is a small family with only one genus (*Aucuba*), 10 species. This family distributes mainly in Bhutan, China, North India, Japan, Korea, Myanmar and Vietnam. Among 10 species, there are 7 endemic species in China. In Vietnam, this family has only 1 species - *Aucuba japonica* Thunb., distribution in Lang Son (Mau Son). During the investigation in Bat Xat, Lao Cai, we found *A. robusta* P. P. Fang & T. P. Soong. Previously, this species only distributes in Quang Tay Province (China). This is new record for the flora of Vietnam. This paper provides fully important information of *A. robusta* P. P. Fang & T. P. Soong such as: description, color photo, type, distribution and morphological comparison with closely species of *Aucuba* Thunb. in Vietnam.

**Keywords:** *Aucuba robusta*, *Aucubaceae*, *Lao Cai*, *new record*, *Vietnam*

### INTRODUCTION

*Aucuba* Thunb. is a genus of 10 species and commonly distributed in the Bhutan, China, North India, Japan, Korea, Myanmar and Vietnam. This genus has some main characters such as: trees or shrubs, branches often pubescent when young, glabrous when old; leaves lanceolate to obovate, pubescent or glabrous, margin serrate, glandular serrate or dentate, rarely entire, leathery or papery; flowers calyx lobes minute, triangular or slightly orbicular; petals free, valvate, purplish red, yellow, or green, oblong or ovate, apex acuminate or caudate; fruit a slightly cylindrical or ovoid [5].

One species and two varieties of *Aucuba* are distributed in Vietnam: *A. japonica* Thunb., *A. japonica* var. *maculata* Regel and *A. japonica* var. *variegata* Dombrain [3]. Until now, *A. japonica* var. *maculata* Regel and *A. japonica* var. *variegata* Dombrain are synonym of *Aucuba japonica* Thunb.. So, *Aucuba* in Vietnam have one species is *Aucuba japonica* Thunb. (Table 1).

During our regular survey work at Ta Giang Phinh commune, Sa Pa district, Lao Cai province and Y Ty commune, Bat Xat

district, Lao Cai province in the East North of Vietnam, we encountered an interesting species of *Aucuba* which was identified as *A. robusta* W. P. Fang & T. P. Soong, previously its distribution has been known only in Guangxi of China, (previously recognized as endemic to Guangxi, China), was reported in Vietnam. This plant differs from the closely related species. After carefully studying the available literature [1], [2], [4] and consulting the type specimens housed in different herbaria. The plant was found to be different from the known Vietnamese species by shorter staminate inflorescences (2 cm long), shape leaves often oblong or lanceolate, shorter petals (2 mm). In this study, we reported *A. robusta* as a newly added taxon to the Flora of Vietnam and its description, habitat, color photographs and key of related taxa are provided.

### MATERIALS AND METHODS

**Materials:** All species of the *Aucuba* Thunb. in Vietnam through specimens stored in the herbariums.

**Methods:** We have applied the morphological comparison method in this study.

### RESULTS AND DISCUSSION

#### **Key species of *Aucuba* in Vietnam**

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1. Staminate inflorescences paniculate (ca. 7-10 cm); apex of petals shortly acuminate (ca. 0.5 mm); petals ca. 3.5 - 4.5 mm; stamens 1.25 mm; leaves thickly leathery.....

..... *A. japonica*

1. Staminate inflorescences racemose-paniculate (ca. 2 cm); apex of petals caudate (ca. 1 mm); petals ca. 2 mm; stamens 1 mm; leaves thickly papery.....

..... *A. robusta*

#### Taxonomic Treatment:

*Aucuba robusta* W. P. Fang & T. P. Soong, J. Sichuan Univ., Nat. Sci. Ed. 1:70, 1982; Zhengy, W. & Raven, Fl. China 14: 224, 2005. **TYPE:** CHINA, Guangxi: Dongnan Xian, S.S. Chang 11444 (Isotype: IBSC, K).

Shrubs, to 30 - 50 cm tall; branches stout, grayish brown or grayish yellow, pubescent. Petiole stout, 1.5 - 2 cm, sparsely pubescent; leaf blade abaxially whitish green, often oblong or lanceolate, rarely obovate-oblong, 10 - 16 × 2 - 3.7 cm, papery, adaxially sparsely pubescent, all veins raised except midvein adaxially, base cuneate, margin serrulate or denticulate with teeth ending in gland at end of vein, apex acuminate. Staminate inflorescences dark purple, ca. 2 cm. Carpellate inflorescences not seen, infructescences ca. 3.5 cm. Staminate flowers: calyx lobes 4, undulate; petals ovate, ca. 2 × 1.5 - 1.8 mm, apex caudate for ca. 1 mm; stamens ca. 1 mm. Carpellate flowers not

seen. Fruit light green, dark brown when dry, oblong, ca. 1.2 cm, ca. 0.5 cm in diam., base slightly pubescent; fruiting pedicel grayish yellow, stout, pubescent, conspicuously expanded at juncture with fruit. **(Fig. 1).**

**Flowering:** (Mar- April).

**Distribution:** China (Guangxi). Vietnam Lao Cai province, Bat Xat district, Y Ty commune, Nheu Co San mountain, primary evergreen broad-leaved humid forest on sandstone at elevation about 1931 m a.s.l. around point 22°37'35.00N 103°37'33.7E, small shrubs, to 30 - 50 cm tall, locally common.

**Specimens examined:** VIET NAM, Lao Cai province, Bat Xat district, Y Ty: 14<sup>th</sup> April, 2017; T.T. Bach, B. H. Quang, T.D. Binh, D.H. Son, V.A. Thuong; VK 6996 (HN). Lao Cai province, Sa Pa district, Ta Giang Phinh: 06<sup>th</sup> April, 2017; B. H. Quang, N.V. Du, T.D. Binh, D.H. Son, D. Justice, B. White, A. Hill, S. McMahan, D. Hinkley; HN-UBC 163 (HN).

#### CONCLUSION

1. Building the key to distinguish *A. robusta* and *A. japonica*.
2. The morphological characteristics and related information of the *A. robusta* have been described including type, fruit season, distribution, research sample, color photographs and the table compares the characteristics of *A. robusta* and *A. japonica*.

**Table 1.** Morphological comparison of *A. robusta* with *A. Japonica*

Morphological characters	<i>A. robusta</i>	<i>A. japonica</i>
The color of the leaf	Whitish green	Light green
Leaves	oblong or lanceolate, rarely obovate-oblong, 10 - 16 × 2 - 3.7 cm, papery	narrowly elliptic to ovate-elliptic, 8 - 20 × 5 - 12 cm, leathery
Staminate inflorescences	2 cm long	7-10 cm long
Apex of petals	1 mm	0,5 mm
Petals	2 mm long	3,5-4,5 mm long
Stamen	1 mm long	1,25 mm long

#### Acknowledgments

We are thankful to the curators of herbarium of Institute of Ecology and Biological Resources (HN) for allowing us to study the vouchers and project on Bioprospecting on Biological Materials of Vietnam and Korea.

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**Figure 1.** 1. Habitus; 2. Leaves; 3. Inflorescence; 4,5,6. Flowers  
(All photo by Bui Hong Quang)

## TÓM TẮT

***Aucuba robusta* W. P. Fang & T. P. Soong (Aucubaceae): MỘT LOÀI BỔ SUNG CHO HỆ THỰC VẬT VIỆT NAM**

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Aucubaceae là họ thực vật nhỏ với chỉ 1 chi (*Aucuba*), khoảng 10 loài. Họ này phân bố chủ yếu ở Bhutan, Trung Quốc, bắc Ấn Độ, Nhật Bản, Hàn Quốc, Myanmar và Việt Nam. Trong số 10 loài, có 7 loài là đặc hữu của Trung Quốc. Ở Việt Nam, họ này mới ghi nhận chỉ có 1 loài là *A. japonica* Thunb., phân bố ở Lạng Sơn (Mẫu Sơn). Trong quá trình điều tra thực địa tại Bát Xát, Lào Cai, chúng tôi đã phát hiện được loài *A. robusta* P. P. Fang & T. P. Soong. Trước đây, loài này chỉ phân bố ở tỉnh Quảng Tây (Trung Quốc). Đây là loài thực vật ghi nhận mới cho hệ thực vật Việt Nam. Bài báo này cung cấp đầy đủ những thông tin quan trọng của loài *A. robusta* P. P. Fang & T. P. Soong bao gồm: Mô tả loài, hình ảnh màu, mẫu chuẩn, phân bố và so sánh hình thái với các loài liên quan của chi *Aucuba* Thunb. ở Việt Nam.

**Từ khóa:** *Aucuba robusta*, *Aucubaceae*, *Lào Cai*, *new record*, *Vietnam*

**Ngày nhận bài:** 26/02/2018; **Ngày phản biện:** 12/3/2018; **Ngày duyệt đăng:** 27/4/2018

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