



## A unique form of *Salix schwerinii* E.L. Wolf (Salicaceae Mirb.) from the Russian Far East

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Manuscript received: 07.02.2018  
Review completed: 13.05.2018  
Accepted for publication: 15.05.2018  
Published online: 16.05.2018

### ABSTRACT

A golden form of *Salix schwerinii* new to the science was described from the territory of Zeya State Nature Reserve. This is the only form with golden leaves noted among all representatives of the family Salicaceae.

**Keywords:** *Salix schwerinii*, forma *aurea*, new form, Far East, Amur Region

### РЕЗЮМЕ

Каракулов А.В. Уникальная форма *Salix schwerinii* E.L. Wolf (Salicaceae Mirb.) с Дальнего Востока России. С территории Зейского государственного природного заповедника описана новая для науки золотистая форма *Salix schwerinii*. Это единственная форма с золотистыми листьями, отмеченная среди всех представителей семейства Salicaceae.

**Ключевые слова:** *Salix schwerinii*, форма *aurea*, новая форма, Дальний Восток, Амурская область

The *Salix* L. species comprise an important part of diversity of woody plants in Asian Russia. They occur in all natural-climatic zones over the whole area of Siberia and the Russian Far East and are represented by 103 species (Baikov 2012). Subspecies and forms of willows were distinguished and described by habit features (spreading, pyramidal, weeping, clavate), color of bark of young branches and the shape of branches (redbark, yellowbark, greenbark, flexuose) and leaf color (blue, silvery, etc.). None of the species from the genera of the family Salicaceae Lindl.: *Chosenia* Nakai, *Salix* L., *Populus* L. have forms with golden leaves (Komarov 1936, Sokolov 1951, Skvortsov 1968, Kolesnikov 1974, Koropachinskiy & Vstovskaya 2002).

A new form of *Salix schwerinii* with golden colour of leaves (Fig. 1) was found during the field work in Zeya Nature Reserve in Amur Region. Earlier, only a weeping form had been described in this species (Bakulin et al. 2008). Herbarium specimens were collected at the foot of the Tukuringra Mountain Range, the flora of which includes 14 species of willow (Starchenko 2008, Veklich & Darman 2013).

### *Salix schwerinii* E.L. Wolf f. *aurea* A. Karakulov forma nova

A shrub up to 6 m tall. Young shoots are short-hairy, olive-golden, later brown, thin, brittle. Leaves are alternate, 2–12 cm long, 0.3–1.5 cm wide, lanceolate, almost linear. The margin of the blade is even, slightly curled beneath. Leaves are glabrous, shiny above, young leaves golden, later golden-green, silvery-white beneath due to dense short and accumbent pubescence. Stipules are awl-shaped, up to 3 mm long, quickly deciduous.



Figure 1 *Salix schwerinii* E.L. Wolf f. *aurea* A. Karakulov in natural habitat



Figure 2 Type specimen of *Salix schwerinii* E.L. Wolf f. *aurea* A. Karakulov forma nova



**Type specimens:** “Russia, Amur Oblast, Zeya Region, Zeya State Nature Reserve, 23 km of the Zeya-Zolotaya Gorka motorway, 53°54'05"N, 127°05'13"E, elevation 515 m above sea level, 06.12.2014. Coll. & Det. A. Karakulov. **Holotypus:** NSK [NSK0000832], **Isotypus:** NSK [NSK0000831] (Fig. 2).

A revealed golden form of *Salix schwerinii* occurs at the southern foot of the Tukuringra Mountain Range in the thickets of *Salix schwerinii*, *Duschekia fruticosa* (Rupr.) Pouzar and *Betula pendula* Roth. It is highly ornamental due to bright foliage and is of specific interest for urban plantings. It is in need of conservation.

## ACKNOWLEDGEMENTS

The work was carried out within the framework of the project of Central Siberian Botanical Garden SB RAS AAAA-A17-117012610054-6 “Analysis of intraspecific structure of resource plants of Asian Russia, selection and preservation of the gene pool”, No. USU 440534. When preparing the article, the materials of bioresource scientific collection of CSBG SB RAS “Herbarium of higher vascular plants, lichens and fungi (NSK)” were used, No. USU 440537. The author expresses his thanks to administration and staff of Zeya State Nature Reserve for the assistance in organization, conducting field work and collection of plant material.

## LITERATURE CITED

- Baikov, K.S. (ed.) 2012. *Synopsis of the flora of Asian Russia: Vascular plants*. Izdatel'stvo Sibirskogo otdeleniya RAN, Novosibirsk. 640 pp. (in Russian). [Конспект флоры Азиатской России: Сосудистые растения / под ред. К.С. Байкова. Новосибирск: Изд-во СО РАН, 2012. 640 с.]
- Bakulin V. T., E.V. Banaev, T.N. Vstovskaya, T.N. Kiseleva, I.Yu. Koropachinsky, N.P. Lapteva, R.I. Loskutov, E.M. Lyakh, O.N. Potemkin & L.N. Chindyaeva 2008. *Woody plants for landscaping in Novosibirsk*. Geo, Novosibirsk. 303 pp. (in Russian). [Бакулин В.Т., Банаев Е.В., Встовская Т.Н., Киселева Т.Н., Коропачинский И.Ю., Лаптева Н.П., Лоскутов Р.И., Лях Е.М., Потемкин О.Н., Чиндяева Л.Н. 2008. Древесные растения для озеленения Новосибирска. Новосибирск: Гео. 303 с.]
- Kolesnikov, A.I. 1974. *Ornamental dendrology*. Lesnaya promyshlennost', Moscow. 704 pp. (in Russian). [Колесников А.И. 1974. Декоративная дендрология. М.: Лесная промышленность. 704 с.]
- Koropachinskiy, I.Yu. & T.N. Vstovskaya. 2002. *Woody plants of Asian Russia*. Izdatel'stvo Sibirskogo otdeleniya RAN, Novosibirsk. 707 pp. (in Russian). [Коропачинский И.Ю., Встовская Т.Н. 2002. Древесные растения Азиатской России. Новосибирск: Изд-во СО РАН. 707 с.]
- Skvortsov, A.K. 1968. *Willows of the USSR: systematic and geographical review*. Nauka, Moscow. 262 pp. (in Russian). [Скворцов А.К. 1968. Ивы СССР: систематический и географический обзор. М.: Наука. 262 с.]
- Sokolov, S.Ya. (ed.) 1951. *Trees and shrubs of the USSR, vol. 2*. Izdatel'stvo Akademii nauk SSSR, Moscow, Leningrad. 610 pp. (in Russian). [Деревья и кустарники СССР. 1951. / под ред. С.Я. Соколова. Т. 2. М., Л.: Изд-во Академии наук СССР. 610 с.]
- Starchenko, V.M. 2008. *Flora of the Amur Oblast' and issues of its conservation: the Russian Far East*. Nauka, Moscow. 228 pp. (in Russian). [Старченко В.М. 2008. Флора Амурской области и вопросы ее охраны: Дальний Восток России. М.: Наука. 228 с.]
- Komarov, V.L. (ed.) 1936. *Flora of the USSR, vol. 5*. Izdatel'stvo Akademii nauk SSSR, Moscow, Leningrad. 762 pp. (in Russian). [Флора СССР / под ред. В.Л. Комарова. Т. 5. М., Л.: Издат-во Академии наук СССР, 1936. 762 с.]
- Veklich, T.N. & G.F. Darman. 2013. *Illustrated flora of Zeya reserve*. Studiya Art, Blagoveshchensk. 378 pp. (in Russian). [Веклич Т.Н., Дарман Г.Ф. 2013. Иллюстрированная флора Зейского заповедника. Благовещенск: Студия Арт. 378 с.]