



Nomenclatural comments on the alliance *Pino sibiricae-Laricion sibiricae*

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Abstract

The name *Pino sibiricae-Laricion sibiricae* was introduced in 1988 by Dostálek et al. and then again in 2004 by Ermakov. Further, the latter name, despite of homonymy, has been accepted in several Russian literature sources on the basis of a misapplication of ICPN Art. 37. The validity and legitimacy of the name introduced by Dostálek et al. are discussed and clarified, whereas Ermakov's illegitimate homonym must be rejected according to Art. 31.

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Abbreviations: ICPN = International Code of Phytosociological Nomenclature (Theurillat et al. 2021).

Keywords

homonym, nomenclature, North Asia, phytosociology, syntaxon, taiga, *Vaccinio-Piceetea*

Introduction

In a paper devoted to several types of South Siberian vegetation, Guinochet (1982) described some new syntaxa of forests, meadows, and steppe communities. Among them the taiga forest communities have been described as the association *Rhododendro-Pinetum sibiricae* and suballiance *Pino-Laricion sibiricae* assigned to the alliance *Vaccinio-Piceion* Braun-Blanquet 1939 (order *Vaccinio-Piceetalia* Braun-Blanquet 1939 and class *Vaccinio-Piceetea* Braun-Blanquet, Sissingh et Vlieger 1939). It was the first attempt to classify the South Siberian vegetation according to the Braun-Blanquet approach. Since then, just a few studies devoted to the syntaxonomy of taiga forests in South Siberia have been carried out. Our aim is to clarify the nomenclatural issues related to the taiga forest syntaxa initially described by Guinochet (1982).

The name *Pino sibiricae-Laricion sibiricae*

Guinochet (1982: 296, table 1) described two new associations of taiga forests (*Rhododendro-Pinetum sibiricae* and *Piceo-Abietetum sibiricae*) from Sayan mountains (South Siberia) subordinated to the new suballiance *Pino-Laricion sibiricae*. However, the associations are invalid because their diagnoses contain two relevés and the type was not designated (ICPN, Art. 5a). Accordingly, the suballiance is also invalid because it does not contain a valid association name (Art. 2b). Later, Dostálek et al. (1988: 33) validated the association *Rhododendro-Pinetum sibiricae* by designating a type relevé with an unambiguous reference to Guinochet (1982: table 1, relevé 1). They also proposed to raise Guinochet's suballiance to the rank of alliance with the name *Pino sibiricae-Laricion sibiricae*,

designating the association *Rhododendro-Pinetum sibiricae* as its nomenclatural type. In this way, they validated the alliance name; the requirement of Art. 8 (indication of character or differential species for the alliance) was fulfilled in the original diagnosis provided by Guinochet (1982). According to ICPN Recommendations 10C and 46D, the correct author citations of these names are *Rhododendro daurici-Pinetum sibiricae* Guinochet ex Dostálek et al. 1988, because *Rhododendron dauricum* is the only *Rhododendron* species present in the type relevé designated by Dostálek et al. (1988), and *Pino sibiricae-Laricion sibiricae* Guinochet ex Dostálek et al. 1988.

Much later, Ermakov and Alsynbaev (2004: 701–702) described an alliance also named *Pino sibiricae-Laricion sibiricae* Ermakov in Ermakov et Alsynbaev 2004 from southwestern Siberia. Although the authors did not use the Latin word *typus*, the alliance is valid according to Art. 5 because it contains a single association (*Carici iljini-Laricetum sibiricae* Ermakov in Ermakov et Alsynbaev 2004) described with a single relevé. These names have been accepted in the prodromus of vegetation syntaxa of Russia (Ermakov 2012: 449), and in the overview of syntaxa of the taiga larch forests of continental Northern Asia (Ermakov 2019). In the last publication, Ermakov (2019: 82–83) rejects the *Rhododendro-Pinetum sibiricae* Guinochet 1982 as a nomen dubium (Art. 37) and considers that the *Rhododendro-Pinetum sibiricae* Guinochet ex Dostálek et al. 1988 and the *Pino sibiricae-Laricion sibiricae* Guinochet ex Dostálek et al. 1988 (included as synonym of the *Pino sibiricae-Laricion sibiricae* Ermakov in Ermakov et Alsynbaev 2004) are nomina nuda (Arts. 2b, 8). As explained above, Guinochet's names are invalid, but the names proposed by Dostálek et al. (1988) fulfil the requirements for validity. In a recent publication, Ermakov (2023: 166) indicates the invalidity of Guinochet's association names according to Art. 5, but erroneously considers the names of Dostálek et al. (1988) as invalid, stating that the type relevé of the association “is so incomplete that it makes impossible to use it in syntaxonomic analysis”, and that Art. 37 determines the invalidity of an association name. Application of Arts. 37 (associations) and 38 (higher rank syntaxa) determine illegitimacy (Definition V) but not invalidity of names, and illegitimate names also generate homonymy (Definition IX, Art. 31). Even if the *Pino sibiricae-Laricion sibiricae* Guinochet ex Dostálek et al. 1988 would be rejected according to Art. 38, it would still be a valid name and thereby a prior heterotypic homonym of the *Pino sibiricae-Laricion sibiricae* Ermakov in Ermakov et Alsynbaev 2004 that must be rejected according to Art. 31. Indeed, in the current edition of the ICPN the rejection of an association name as a dubious name requires a reasoned proposal addressed to the CCCN, and the CCCN recommendation about the proposal must be ratified by the Assembly of the Working Group for Phytosociological Nomenclature (Art. 37 § 2 and 3). Since the name *Pino sibiricae-Laricion sibiricae* Guinochet ex Dostálek et al. 1988 has not been formally proposed for rejection to the CCCN, it is still a legitimate name.

On the interpretation of the type relevé of *Rhododendro daurici-Pinetum sibiricae*

Ermakov (2023: 166) argues that “the species composition of relevés in table 1 in Guinochet (1982) is so incomplete that it is impossible to use them in syntaxonomic analysis”, and “the floristic composition of this community of coniferous forests was characterized so incompletely that it made it impossible to correctly interpret it syntaxonomically at the level of association, alliance, order, and even class”. However, no such syntaxonomic analysis was presented. The type relevé of the *Rhododendro-Pinetum sibiricae* contains 12 species of vascular plants, ten of them considered by Ermakov (2012, 2019) as character species of the class *Vaccinio-Piceetea* or its subordinate syntaxa. Indeed, Ermakov (2019, 2023) considered *Larix sibirica* Ledeb., *Pinus sibirica* Du Tour and *Calamagrostis obtusata* Trin. as diagnostic species of the alliance *Pino sibiricae-Laricion sibiricae* Ermakov in Ermakov et Alsynbaev 2004 (subordinated to the order *Ledo palustris-Laricetalia cajanderi* Ermakov 2023), and *Bergenia crassifolia* (L.) Fritsch and *Rhododendron dauricum* L. as diagnostic species of the association *Bergenio-Pinetum sibiricae* Zhitlukhina et Alimbekova 1987 nom. ined. (Art. 1) (Zhitlukhina and Alimbekova 1987). Consequently, there is little doubt about the syntaxonomic position of the type relevé at the class, order and even alliance level, although certainly its floristic composition is not identical to that of other associations included in the alliance *Pino sibiricae-Laricion sibiricae* (Anenkhonov and Chytrý 1998; Makunina 2020; Ermakov and Polyakova 2022; Ermakov 2023). Applying Art. 37 to the type relevé is not advisable without a corresponding comparative analysis.

Another question raised by Ermakov (2019, 2023) concerns the floristic poverty of the type relevé. As a matter of fact, reduced numbers of vascular plant species are not infrequent in such forest communities, being sometimes even lower than 10–15 species per 400 m² (Smagin 1980). Similar patterns of floristic poverty can be found in the unpublished manuscript by Zhitlukhina and Alimbekova (1987), where many or even most of the relevés of several associations (*Bergenio-Pinetum sibiricae*, *Rhododendro daurici-Pinetum sibiricae*, *Rhododendro aurei-Pinetum sibiricae*, *Vaccinio myrtilli-Pinetum sibiricae*) contain fewer than 13 vascular plant species.

Forest communities like those described by Guinochet (1982) are rather typical in Southern Siberia and known as “Siberian cedar-pine green moss forests” (Peshkova 1985). Physiognomically, these communities are related to boreal mesophytic dark-coniferous and mixed light-dark coniferous forests, possessing a moss layer of quite common and widely distributed species (e.g., *Pleurozium schreberi*, *Hylocomium splendens*, *Ptilium crista-castrensis*, *Dicranum polysetum*, *Abietinella abietina*). The environmental filters for common moss species in such communities are the mesic forest conditions, and mosses are rather indifferent to the species composition of the tree layer. Less common moss

species are typically confined to microsites within the forest. In general, the moss layer is physiognomically important, but its floristic composition has a reduced applicability for classifying mesic forest communities. For this reason, neither moss species, nor their combinations can be used for the diagnosis of lower syntaxa of mesic boreal forests (and also hemiboreal forests). In fact, with a few exceptions, moss species have not been used in diagnostic combinations for distinguishing associations and subassociations of boreal mesic forests in Southern Siberia (Ermakov 2019). Therefore, the lack of information on moss species in the type relevé published by Guinochet (1982) should not be considered as a good reason for the rejection of the association as well as of the alliance *Pino sibiricae-Laricion sibiricae* Guinochet ex Dostálek et al. 1988.

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Conclusion

The association *Rhododendro daurici-Pinetum sibiricae* Guinochet ex Dostálek et al. 1988 as well as the alliance *Pino sibiricae-Laricion sibiricae* Guinochet ex Dostálek et al. 1988 are valid and legitimate names. Therefore, the name *Pino sibiricae-Laricion sibiricae* Ermakov in Ermakov et Alsynbaev 2004 must be rejected as a later homonym.

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