

## Vegetation of the classes Carici-Kobresietea and Cleistogenetea squarrosae in Central Chukotka

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with 1 figure and 9 tables

**Abstract.** Phytosociology of xerophytic tundras and cryophytic steppes was studied in the middle reaches of the Amguema River (178° W, 67° N), Central Chukotka.

*Dryas punctata* tundras are represented by a set of new regional associations of the alliance Oxytropidion nigrescentis (Kobresio-Dryadetalia, Carici-Kobresietea). The association Asahineo chrysanthae-Dryadetum punctatae nov. occurs on low mountain slopes. Subassociation typicum nov. represents the patchy *Dryas* tundras on screes and subassociation hedysaretosum truncati nov. the closed-up *Dryas* mountain tundras. On raw soil of river terraces two other associations occur. The Diapensio obovatae-Dryadetum punctatae nov. represents patchy *Dryas* tundras and contains a subassociation inops nov. dominating on dry sites, whereas a subassociation vaccinietosum microphylli nov. is found on deeper and more mesic soil. The association Rhododendro camtschatici-Dryadetum punctatae nov. is restricted to watershed sites with slightly increased snow accumulation.

The tundra-steppes and steppes of Beringia are placed within a new alliance Androsacio arctisibiricae-Aconogonion laxmannii (Kobresio-Dryadetalia, Carici-Kobresietea). A suballiance Oxytropidio vassilczenkoi-Dryadenion nov. with a single, new association Oxytropidio-Dryadetum punctatae with three variants, refers to closed-up tundras and tundra-steppes co-dominated by *Dryas punctata* and *Kobresia myosuroides*. A typical suballiance Androsacio-Aconogonion nov. with two new associations seems transitional to the Pulsatillion flavescens (Festucetalia lenensis, Cleistogenetea squarrosae) with its center of diversity in the steppes of Yakutia. The association Eremogono capillaris-Caricetum rupestris represents a cryoxerophytic sedge vegetation of wind-exposed ridges (typical variant) and the driest type of the relict Beringian steppe (variant of *Helictotrichon krylovii*). The association Thymo oxyodonti-Caricetum obtusatae refers to typical cryophytic steppes at the easternmost limit of their distribution in Eurasia. The stands are always restricted to southern slopes and are represented by petrophytic and psammophytic variants.

The driest sites of south-facing scree slopes of elevated river banks are grown by vegetation of a new suballiance Astragalo pseudadsurgenti-Calamagrostienion purpurascens (Pulsatillion flavescens, Festucetalia lenensis, Cleistogenetea squarrosae). The Astragalo-Calamagrostietum purpurascens nov. steppes occur on sandy screes, whereas xero-petrophytic semi-dwarfshrub communities of the association Artemisio glomeratae-Salicetum glaucae (with two variants) occur on gravel screes. Artemisietum glomeratae Sumina 1994 is the most open scree vegetation.

**Keywords:** Amguema River, Arctic, cryoxerophytic steppes, *Dryas punctata* tundras, phytocoenology, syntaxonomy.