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Flora List of Stolbovskyy (Shimanobori) Nature Observation Road, Kunashir Island

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Abstract The change of landscapes from evergreen coniferous forest, through mixed forest, to deciduous broadleaf forest was observed along the Stolbovskyy nature observation road on Kunashir Island. The plants growing adjacent to this road were recorded by eye, specimen collection, and taking photographs.

Key words: coniferous forest, deciduous forest, mixed forest, phytogeography

Introduction

The Stolbovskyy nature observation road is located on the Okhotsk Sea-Side of central Kunashir Island (Fig. 1). The nature observation road originated near the center of the Kunashir Island (Figs. 2, 3) and extended northwestward to the coast. The forest landscape along the road changed from evergreen coniferous forest, through mixed forest (Figs. 4, 5), to deciduous broadleaf forest (Fig. 6).

Materials and Methods

The plants growing in the vicinity of the road were recorded by eye, specimen collection, and taking photographs. The surveys were conducted by Y. Kato on August 25, 2012 and by T. Fukuda July 24, 2013. Scientific name was based on Murata and Yonekura (2012). Family name and classification were based on Murata and Yonekura (2013).

Results and Discussions

A list of the flora observed on these surveys is shown in Table 1. Two exotic plants *Pilosella aurantiaca* and *Leucanthemum vulgare* were observed at the entrance of the nature observation road near the center of Kunashir Island. The Russian red list species *Kalopanax septemlobus* var. *septemlobus*, *Taxus cuspidata* and *Magnolia obovata* were identified in the forested areas along the road. Other woody plants observed included *Betula ermanii* var. *ermanii*, *Abies sachalinensis*, *Sorbus commixta* var. *commixta*, *Ulmus laciniata* and *Juglans mandshurica* var. *sachalinensis*. Shrubs and herbaceous plant species were the same as those on Hokkaido Island.

In the coniferous forests, *Clintonia udensis*, *Prunella vulgaris* subsp. *asiatica*, *Chimaphila japonica* were observed, and in the mixed forest and deciduous forests, *Epipactis papillosa* var.

papillosa, *Solidago virgaurea* subsp. *leiocarpa* var. *leiocarpa* f. *japonalpestris*, *Skimmia japonica* var. *intermedia* f. *repens*, *Maianthemum dilatatum*, *Menziesia pentandra*, *Streptopus amplexifolius* var. *papillatus* were observed.

Exotic plants were also observed at the entrance to the nature observation road near the traffic road. However, almost no exotic species were observed in the forested areas along the nature observation road. It was assumed that the nature observation road received very little maintenance because grasses along the side of the road partly covered the road. Although we encountered other people on the nature observation road and saw the soldiers resting at hot springs, the human impact in the area was considered to be relatively low compared to urban areas like Furukamappu (Yuzhno-Kuril'sk) and in cottage areas like Chibukaribetsu (Tret'yakova). Consequently, the number of exotic species observed in the area was very low.

All of collected specimens were deposited at the herbarium of Hokkaido University Museum (SAPS).

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Specimens collected along Stolbovskyy (Shimanobori) nature observation road.

ASTERACEAE

Pilosella aurantiaca (L.) F.Schultz et Sch.Bip. [Kôrin-tanpopo]: Roadside (Entrance of nature observation road)

CYPERACEAE

Carex mollicula Boott. [Hime-shirasuge]: Conifer forest
Carex sachalinensis F.Schmidt var. *sachalinensis* (Sakhalin-itosuge): Conifer forest

ERICACEAE

Chimaphila japonica Miq. [Umegasa-sô]: Mixed forest
Pyrola alpina Andres [Kobano-ithiyakusô]: Mixed forest

POACEAE

Brachypodium sylvatisum (Huds.) P.Beauv. [Yama-kamojigusa]: Deciduous forest
Neomolinia japonica (Franch. et Sav.) Honda [Tatsuno-hige]: Deciduous forest

SAPINDACEAE

Acer ukurunduense Trautv. et C.A.Mey. [Ogara-bana]: Mixed forest

加藤ゆき恵¹, 福田知子²: 2012年・2013年植物調査において国後島中部島登(ストルボフスキー)生態観察路で採集・観察された維管束植物

島登(ストルボフスキー)生態観察路は国後島中部オホーツク海側に位置する, 常緑針葉樹林, 針広混交林, 落葉広葉樹林の林相の変化を観察できる自然歩道である. 樹林帯(常緑針葉樹林, 針広混交林, 落葉広葉樹林)から島登温泉にかけて, 現地で観察できた植物種を記録した.

観察・採集した植物種は, 北海道の樹林帯で普通に見られるものが中心であった. 国後島中央道路に面する生態観察路入り口付近では, コウリンタンポポなどの外来植物種を確認したが, それより奥の観察路では外来種は見られなかった.

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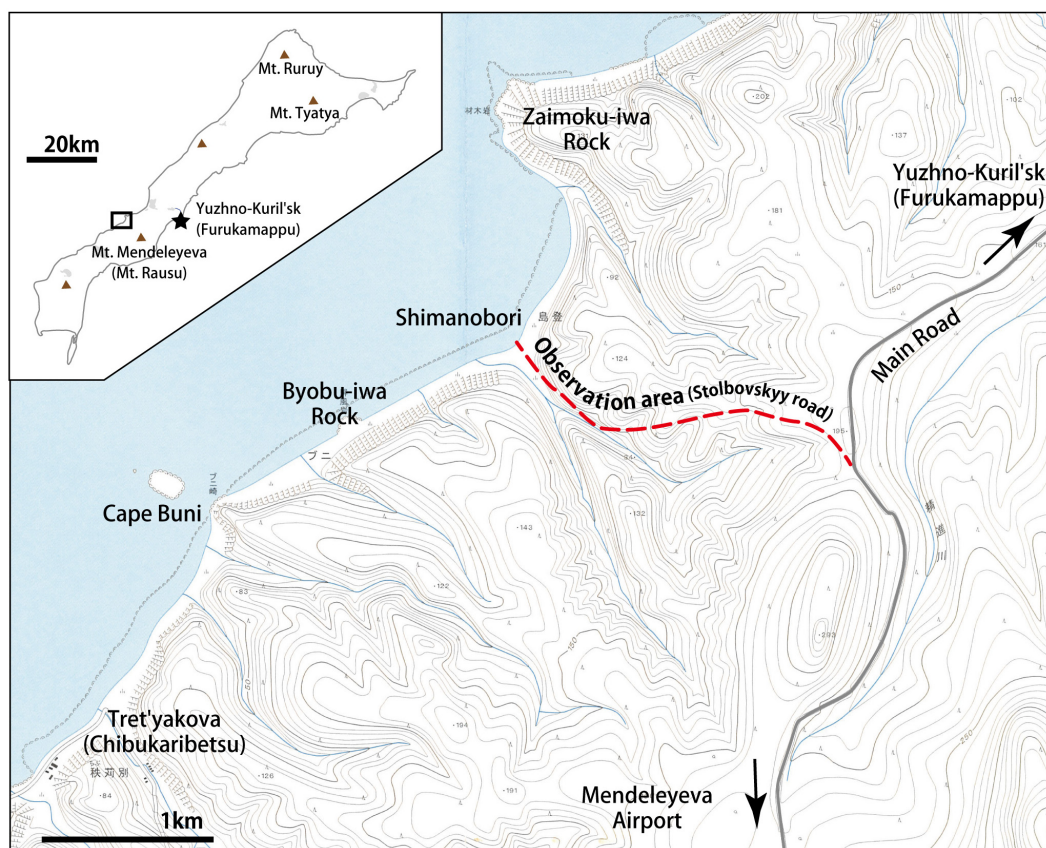


Figure 1.
 Location of Stolbovskyy nature observation road.

Table 1. Plant species of Shimanobori (Stolbovskyy) nature observation road. (Aug. 25, 2012:Kato, Jul. 24, 2013: Fukuda)

Family (APG III)	Scientific name	2012			2013
		Sp.	Ph.	Ob.	Ob.
PTERIDOPHYTA					
Dryopteridaceae	<i>Dryopteris crassirhizoma</i> Nakai				○
Dryopteridaceae	<i>Dryopteris expansa</i> (C.Presl.) Fraser-Jenk. et Jermy				○
GYMNOSPERMAE					
Pinaceae	<i>Abies sachalinensis</i> (F.Schmidt) Mast.		○		○
Pinaceae	<i>Picea jezoensis</i> (Siebold et Zucc.) Carrière		○		○
Taxaceae	<i>Taxus cuspidata</i> Siebold et Zucc.		○		○
ANGIOSPERMAE					
Adoxaceae	<i>Sambucus racemosa</i> L. subsp. <i>kamtschatica</i> (E.L.Wolf) Hultén			○	
Anacardiaceae	<i>Toxicodendron orientale</i> Greene subsp. <i>orientale</i>			○	
Apiaceae (Umbelliferae)	<i>Cryptotaenia canadensis</i> (L.) DC. subsp. <i>japonica</i> (Hassk.) Hand.-Mazz.			○	
Apiaceae (Umbelliferae)	<i>Oenanthe javanica</i> (Blume) DC. var. <i>javanica</i>			○	
Apiaceae (Umbelliferae)	<i>Osmorhiza aristata</i> (Thunb.) Rydb. var. <i>aristata</i>			○	
Aquifoliaceae	<i>Ilex rugosa</i> F.Schmidt var. <i>rugosa</i>			○	○
Araliaceae	<i>Aralia cordata</i> Thunb. var. <i>cordata</i>			○	○
Araliaceae	<i>Kalopanax septemlobus</i> (Thunb.) Koidz. var. <i>septemlobus</i>	○			○
Asparagaceae	<i>Maianthemum dilatatum</i> (A.W.Wood) A.Nelson et J.F.Macbr.			○	
Asparagaceae	<i>Polygonatum odoratum</i> (Mill.) Druce var. <i>maximowiczii</i> (F.Schmidt) Koidz.				○
Asteraceae (Compositae)	<i>Aster glehnii</i> F.Schmidt var. <i>glehnii</i>			○	
Asteraceae (Compositae)	<i>Parasenecio hastatus</i> (L.) H.Koyama subsp. <i>orientalis</i> (Kitam.) H.Koyama var. <i>orientalis</i> (Kitam.) H.Koyama			○	○
Asteraceae (Compositae)	<i>Parasenecio kamtschaticus</i> (Maxim.) Kadota var. <i>kamtschaticus</i>			○	○
Asteraceae (Compositae)	<i>Petasites japonicus</i> (Siebold et Zucc.) Maxim. subsp. <i>giganteus</i> (G.Nicholson) Kitam.			○	○
Asteraceae (Compositae)	<i>Pterocypsela elata</i> (Hemsl.) C.Shih (<i>Lactuca raddeana</i> Maxim. var. <i>elata</i> (Hemsl.) Kitam.)			○	
Asteraceae (Compositae)	<i>Senecio cannabifolius</i> Less.				○
Asteraceae (Compositae)	<i>Solidago virgaurea</i> L. subsp. <i>leiocarpa</i> (Benth.) Hultén var. <i>leiocarpa</i> (Benth.) A.Gray f. <i>japonaplestris</i> Kitam., nom. nud.			○	
Balsaminaceae	<i>Impatiens noli-tangere</i> L.			○	○
Betulaceae	<i>Betula ermanii</i> Cham. var. <i>ermanii</i>	○			○
Betulaceae	<i>Betula platyphylla</i> Sukaczew var. <i>japonica</i> (Miq.) H.Hara				○
Cornaceae	<i>Cornus canadensis</i> L.			○	
Cornaceae	<i>Cornus controversa</i> Hemsl. ex Prain var. <i>controversa</i>			○	
Cyperaceae	<i>Carex mollicula</i> Boott.	○			
Cyperaceae	<i>Carex sachalinensis</i> F.Schmidt var. <i>sachalinensis</i>	○			
Ericaceae	<i>Chimaphila japonica</i> Miq.	○			
Ericaceae	<i>Orthilia secunda</i> (L.) House		○		
Ericaceae	<i>Pyrola alpina</i> Andres	○			
Ericaceae	<i>Rhododendron pentandrum</i> (Maxim.) Graven (<i>Menziesia pentandra</i> Maxim.)			○	
Fagaceae	<i>Quercus crispula</i> Blume var. <i>crispula</i>			○	○
Hydrangeaceae	<i>Hydrangea paniculata</i> Siebold			○	○
Hydrangeaceae	<i>Hydrangea petiolaris</i> Siebold et Zucc.			○	
Hydrangeaceae	<i>Schizophragma hydrangeoides</i> Siebold et Zucc. var. <i>hydrangeoides</i>				○
Juglandaceae	<i>Juglans mandshurica</i> Maxim. var. <i>sachalinensis</i> (Komatsu) Kitam.			○	
Lamiaceae (Labiatae)	<i>Prunella vulgaris</i> L. subsp. <i>asiatica</i> (Nakai) H.Hara			○	
Liliaceae	<i>Clintonia udensis</i> Trautv. et C.A.Mey.		○		○
Liliaceae	<i>Lillium medeoloides</i> A.Gray var. <i>medeoloides</i>			○	○
Liliaceae	<i>Streptopus amplexifolius</i> (L.) DC. var. <i>papillatus</i> Ohwi			○	
Magnoliaceae	<i>Magnolia obovata</i> Thunb.		○		○
Melanthiaceae	<i>Paris verticillata</i> M.Bieb.			○	
Melanthiaceae	<i>Trillium camschatcense</i> Ker Gawl.				○
Melanthiaceae	<i>Veratrum oxysepalum</i> Turcz. var. <i>oxysepalum</i>				○
Onagraceae	<i>Circaea alpina</i> L. subsp. <i>alpina</i>		○		
Orchidaceae	<i>Cephalanthera longibracteata</i> Blume			○	
Orchidaceae	<i>Epipactis papillosa</i> Franch. et Sav. var. <i>papillosa</i>			○	○
Plantaginaceae	<i>Plantago asiatica</i> L.			○	
Poaceae (Gramineae)	<i>Brylkinia caudata</i> (Munro ex A.Gray) F.Schmidt			○	
Poaceae (Gramineae)	<i>Neomolinia japonica</i> (Franch. et Sav.) Honda	○			
Poaceae (Gramineae)	<i>Brachypodium slyvaticum</i> (Huds.) P.Beauv.	○			
Ranunculaceae	<i>Cimicifuga simplex</i> (DC.) Wormsk. ex Turcz.			○	○
Ranunculaceae	<i>Ranunculus silerifolius</i> H.Lév.			○	
Rosaceae	<i>Agrimonia pilosa</i> Ledeb. var. <i>japonica</i> (Miq.) Nakai			○	
Rosaceae	<i>Filipendula camtschatica</i> (Pall.) Maxim.			○	○
Rosaceae	<i>Geum macrophyllum</i> Willd. var. <i>sachalinense</i> (Koidz.) H.Hara			○	
Rosaceae	<i>Padus ssiori</i> (F.Schmidt) C.K.Schneid.				○
Rosaceae	<i>Sorbus commixta</i> Hedl. var. <i>commixta</i>			○	○
Rubiaceae	<i>Galium trifloriforme</i> Kom.			○	
Rutaceae	<i>Skimmia japonica</i> Thunb. var. <i>intermedia</i> Komatsu f. <i>repens</i> (Nakai) Ohwi		○		
Sapindaceae	<i>Acer pictum</i> Thunb.		○		○
Sapindaceae	<i>Acer ukurunduense</i> Trautv. et C.A.Mey.	○			○
Saxifragaceae	<i>Saxifraga fusca</i> Maxim. subsp. <i>fusca</i>		○		○
Ulmaceae	<i>Ulmus davidiana</i> Planch. var. <i>japonica</i> (Rehder) Nakai				○
Ulmaceae	<i>Ulmus laciniata</i> (Trautv.) Mayr		○		○
Urticaceae	<i>Urtica playuphylla</i> Wedd.				○

*Sp. = Specimen collected, Ph. = Photographed, Ob.=Observed.

Scientific name was based on Murata and Yonekura. (2012) .

Family name and classification were based on Murata and Yonekura. (2013) .



Figure 2. The entrance of Stolbovskyy nature observation road, near the main road on Kunashir Island.



Figure 4. Mixed forest landscape.



Figure 3. Signboard for the Stolbovskyy nature observation road.



Figure 5. *Taxus cuspidata* in mixed forest.



Figure 6. *Magnolia obovata* in mixed forest.