Features of the use by Karelians and Russians of plants of local flora as medicinal and food T.P.

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Peculiar properties of utilization plants from local flora by Karelian and Russian as medicinal and nutritional

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SUMMARY

Ethnobotanical research conducted over the past 20 years in a limited area of the Northwestern Federal District of the European part of Russia among Karelians living compactly in the Leningrad Region and Russians living with them, made it possible to note differences in the use of the same plant species as useful local flora. It was revealed that one people living in different administrative regions uses a different number of plants as food and medicinal in folk medicine.

Key words: Karelians, Russians, flora of the North-West, food plants, medicinal plants plants, ethnobotany, resource science.

RESUME

Ethnobotanical studies conducted over the past 20 years in a limited area of the North-West Federal District of European Russia among Karelian, compactly living in the Leningrad region, and Russian, living with them, allowed to note differences in the use as useful plants of the same species of local flora. It was found that people (small ethnic group), living in different administrative areas, use a different number of plants as food and as medicinal in folk medicine.

keywords:Karelian, Russian, Flora of North-West, edible plants, medicinal plants, ethnobotany, plant resources.

The collection of endangered and unique data on the use of plants of the local flora by the peoples living in these territories and their preservation is important not only for modern resource science [1–5], but also for the search for promising sources of domestic medicinal plant raw materials and micronutrients for specialized food products. for various purposes [6, 7]. The active penetration of modern technologies into the daily life of small ethnic groups leads to the rapid oblivion of the still preserved folk knowledge about the plant world, its role in traditional culture and the importance of plants in the ritual life of the family and society. The significance of ethnobotanical research lies in the rapid collection and subsequent analysis of the traditional knowledge of different peoples. Solving the issues of studying the methods of using local flora species for various purposes can be solved by organizing and conducting complex resource research that meets the goals and objectives of the Global Strategy for Plant Conservation [8]. Unfortunately, until recently, most of the research on folk culture, limited mainly to the work of specialists in the humanities, overlooked the issues of interaction between the humanities and natural sciences (ethnoecology and ethnobotany).

One of the ways to identify useful plants in botanical resource science is to study folk experience by interviewing local residents. If such a survey is conducted among representatives of certain ethnic groups, one can speak of the ethnobotanical nature of the study [9–13]. We discussed some features of the use of plants of the local flora by the small peoples of the North as useful ones in previously published works [14-17].

The purpose of this work is to collect and summarize rapidly disappearing information on the use of natural flora species by indigenous peoples as useful (food and medicinal) plants using the example of Karelians and Russians in a number of regions of the north of the European part of Russia.

MATERIALS AND METHODS

The original program for collecting ethnobotanical information on expedition trips developed in the process of getting to know the material and spiritual culture of the studied peoples. It is based on a collection of questions for participants in ethnographic and archaeological expeditions [18]. Before the start of the survey, the personal data of the informant were clarified (full surname, name, patronymic, nationality to which the informant considers himself, year and place of birth, marital status, education, and length of residence in the area where the survey is being conducted (this is especially true for women who after marriage, they often change their place of residence)). During conversations with informants, the respondents were offered books and botanical atlases [19-21] with drawings and photographs of plants, the use of which was discussed. At the same time, they asked the interlocutor to name the local names of the plants in question, if they were known to him. If the species affiliation of the plant remained unclear, the respondent, if it was possible (according to the season and the presence of the plant in nature, as well as taking into account the age and condition of the informant), was asked to show the plant in nature or in preparations (bundles, hay). However, focusing only on the Russian or local name, one can be misled, due to the fact that the same name the population in different, even very close to each other areas, can designate different types of plants, as well as to one plant can refer to multiple titles. asked to show the plant in nature or in blanks (bundles, hay). However, focusing only on the Russian or local name, one can be misled, due to the fact that the same name the population in different, even very close to each other areas, can designate different types of plants, as well as to one plant can refer to multiple titles. asked to show the plant in nature or in blanks (bundles, hay). However, focusing only on the Russian or local name, one can be misled, due to the fact that the same name the population in different, even very close to each other areas, can designate different types of plants, as well as to one plant can refer to multiple titles.

To collect and process field data, we used both personal observations and the preferred in ethnography, non-standardized, and more often semi-standardized interviews (http://refdb.ru/look/2515819.html).

RESULTS AND DISCUSSION

During the analysis of data on the use of plants by Karelians and Russians from different regions of the North-West region of Russia, it was revealed (Tables 1–4) that parts and organs of the same plant species are not used equally in different regions, as in folk medicine and hygiene and food quality. The main ways of using plants in the practice of traditional medicine and hygiene is the preparation of decoctions, steams from dried raw materials, or freshly squeezed juices. The use of alcohol-containing liquids was not practiced due to the lack of such practice.

Table 1

Plants of the local flora in folk medicine and hygiene among the Karelians

Latin name of the species	Used parts and bodies	Regions where Karelians live			
		Tx	bg	Ol	sp
Achillea sp. yarrow	Aboveground part			*	*
Achillea sp. yarrow	Juices, resins, tar			*	
Aegopodium podagraria Snyt vulgaris	Leaves				*
Alnus incana Alder gray	Branches, shoots			*	
Alnus incana Alder gray	Fruits and seedlings				*
Anthemis tinctoria Pupavka dyeing	Aboveground part	*			
Arctium tomentosum Burdock felt	Leaves			*	
Arctostaphylos uva-ursi Bearberry	Aboveground part			*	
Atriplex sp. Quinoa	Aboveground part			*	
Betula sp. Birch	Bark, birch bark			*	
Betula sp. Birch	Branches, shoots			*	
Betula sp. Birch	kidneys	*		*	
Betula sp. Birch	combustion products			*	
Bidens tripartite Three-part series	Aboveground part				*
Capsella bursa-pastoris Shepherd's purse ordinary	Aboveground part				*
Chamaenerion angustif olium Ivan-tea narrow-leaved	Aboveground part				*
Chelidonium majus Large celandine	Aboveground part				*

Table 1 (continued)

Latin name of the species	Used parts and bodies	Regions where Karelians live			
		Tx	bg	Ol	sp
Comarum palustre marsh cinquefoil	underground organs				*
Comarum palustre marsh cinquefoil	Aboveground part			*	*
Drosera rotundifolia Rosyanka rotundifolia	Juices, resins, tar			*	
Filipendula ulmaria meadowsweet	Branches, shoots			*	
Hypericum sp. St. John's wort	Aboveground part			*	*
Juniperus communis Juniper ordinary	Branches, shoots			*	*

Lamium album White lamb	Aboveground part		*		
ledum palustre Ledum marsh	Aboveground part				*
Lepidotheca suaveolens Lepidotheca fragrant (chamomile without reed)	Aboveground part	*		*	*
Mentha arvensis field mint	Aboveground part	*		*	*
Oxycoccus sp. Cranberry	Fruits and seedlings			*	*
padus avium Common bird cherry	Branches, shoots			*	
padus avium Common bird cherry	Fruits and seedlings	*		*	
Picea sp. Spruce	Branches, shoots				*
Picea sp. Spruce	combustion products			*	
Picea sp. Spruce	Juices, resins, tar		*		
Pinus sylvestris Scotch pine	kidneys			*	
Polygonum aviculare Highlander bird	Aboveground part			*	
Populus tremula Aspen	Leaves			*	
Ranunculus acris buttercup caustic	Aboveground part				*
Ribes sp. Currant	Leaves			*	
Rubus chamaemorus Cloudberry	Leaves			*	*
Rubus chamaemorus Cloudberry	Fruits and seedlings			*	*
Rubus idaeus Raspberry ordinary	Branches, shoots			*	
Rubus idaeus Raspberry ordinary	Fruits and seedlings			*	*
Rumex conference horse sorrel	Aboveground part				*
Sorbus aucuparia Mountain ash	Fruits and seedlings	*		*	

Table 1 (continued)

Latin name of the species	Used parts and bodies	Regions where Karelians live			
		Tx	bg	Ol	sp
Sphagnum sp. Sphagnum, peat moss	whole plant				*
Stellaria media Chickweed medium, wood lice	Aboveground part			*	*
Tanacetum vulgare Common tansy	Aboveground part			*	
Taraxacum officinale Dandelion officinalis	Juices, resins, tar			*	
Tussilago f arf ara Common coltsfoot	Leaves		*	*	
Urtica dioica Stinging nettle	Leaves			*	*
Vaccinium myrtillus Blueberry	Fruits and seedlings			*	*
Vaccinium vitis-idaea Cowberry	Leaves				*
Vaccinium vitis-idaea Cowberry	Fruits and seedlings			*	
Valeriana officinalis Valerian officinalis	underground organs				*
Viburnum opulus Viburnum ordinary	Fruits and seedlings		*		*

Note: Karelian residence areas: Tkh - Tikhvinsky, Bg - Boksitogorsky, Ol - Olonetsky, Sp - Spirovsky; sp. - the plant is defined to the genus, the species of which, for various reasons, are not distinguished by the local population.

From the data in Table. Table 1 shows that 44 genera that have medical and hygienic use are not similarly used by the Karelian population. In the Olonets region, they remember the use of 32 genera for this purpose, in Spirovsky - about 27, in Tikhvin - about 6, in Boksitogorsk - about 5. In the Tikhvin region they use the aerial partAnthemis tinctoria, in Boksitogorsky - the aerial part of Lamium album and fruitsViburnum opulus, in Olonetsky - above-ground part of Comarum palustre, Equisetumsp., Polygonum aviculare and Stellaria media, juice of the herb Drosera rotundifolia and leaves of Taraxacum officinale and ashPiceasp. In the Spirovsky district, infructescences are usedAlnus incana, the aerial part of Capsella bursa-pastoris, Ledum palustre, Ranunculus acris, underground organs of Comarum palustre, and peat mossSphagnumsp.

The above-ground part, noted by us 26 times, is most in demand in use, leaves are used 10 times, branches - 7, juices - 4, kidneys - 3, underground organs and combustion products - 2 each, the bark and the whole plant - once.

Of the unusual ways of using plants by Karelians, we note the use in the Spirov region - rubbing juice into the skinAchilleasp. (to get rid of itching from insect bites), in the same place - applying fresh leavesAegopodium podagraria (for joint pain). in Tikhvin In the Karelian region, an infusion of the aerial part is usedAnthemis tinctoria (for dermatitis), in Olonetsky - leaves are used Arctium tomentosum (for joint and headaches) and tincture of elevated partsAtriplexsp. (from women's diseases). In the Olonets region, a leaf was usedBetulasp. (as an anti-abscess and in compresses for injuries). In the Spirovsky district, a decoction of the aerial part Chamaenerion angustifolium has been used for colds. In Karelia and the Tver region, Comarum palustre was used (for joint pain). In the Olonets region, the aerial part of Drosera rotundifolia (for warts), shoots of Filipendula ulmaria (for liver diseases) and Juniperus communis are used. (for colds and to repel rodents). In the Boksitogorsk district, the above-ground part is used Lamium album (for hypertension and as a sedative). The aerial part of Lepidotheca suaveolens is used

in the Tikhvin region (insecticide). Karelians in a number of regions also use the aerial part as an insecticide.Mentha arvensis. Karelians in the Olonetsky region use fresh and dry leaves of Populus tremula as bedding under bedridden patients to prevent bedsores. Aboveground part Ranunculus acris is used as an insecticide in the Spirovskiy district. Karelians everywhere use sepals to treat colds.Rubus chamaemorus. Aboveground partStellaria media (from edema in the legs) is used by the Karelians of the Spirov region, plantStellaria media as a whole in the Olonets region is used for abscesses.

From Table. 2 shows that at present the population uses little plants for medical and hygienic purposes. Of the 65 births, 7 were recorded in the Babaevsky district, 5 in the Spirovsky district, 4 in Borovichsky, Dedovichsky and Dnovsky districts, and 2 in Belozersk and Sebezhsky districts. Only in Babevsky and Belozersky districts we noted the use of ashBetulasp., kidneys are also used in BabaevskyPinus sylvestris (for skin diseases), in Borovichsky - the use of ash Pinus sylvestris, in Spirovskoye - the aerial part of Eqisetum sp. (sedative effect), in Dedovichsky and Dnovsky districts - the use of branches of Quercus robur, in the Belozersky district an unusual use of Oxycoccus fruits was notedsp. (treatment of mastitis).

Currently, the use of fruits for medical purposes is most in demand (9 times), the use of branches was recorded 5 times, leaves and ash 3 times, aerial parts and buds 2 times, the use of underground organs was recorded once.

In accordance with the data in Table. 3, the use of 36 genera of plants for food is noted for Karelians. Most food plants are known to the Karelians of the Olonets region (29), the Karelians of the Spirov region know about eating 25 species, the Karelians of Tikhvin about 16. Karelians use fruits most of all - they are mentioned 35 times, in 15 cases they say about eating leaves , 10 times the use of the aerial parts, 5 - underground organs, 3 - seeds and flowers are mentioned, in two cases we are talking about the use of juice for food and one time the use of the stem, bark, shoots and the whole plant is mentioned.

table 2

Plants of the local flora in folk medicine and hygiene among Russians

Latin name of the species	Used parts and organs	Regions where Russians live					
		Ba	Bz	Br	De, Day	Sbzh	sp
Betula sp. Birch	Branches, shoots			*	*	*	
Betula sp. Birch	Products combustion	*	*				
Centaurea sp. knapweed	Aboveground part	*					
Eqisetum sp. horsetail	Aboveground part						*
Fragaria vesca Wild strawberry	Leaves			*			
Juniperus communis Juniper ordinary	Branches, shoots				*		
Leucanthemum vulgare Daisy	Aboveground part						*
Oxycoccus sp. Cranberry	Fruits and seedlings		*				*
padus avium Common bird cherry	Fruits and seedlings	*			*	*	
Pinus sylvestris Scotch pine	kidneys	*					

Pinus sylvestris Scotch pine	Products combustion			*			
Plantago sp. Plantain	Leaves						*
Quercus robur Pedunculate oak	Branches, shoots				*		
Rubus idaeus Raspberry ordinary	Fruits and seedlings	*					
Urtica dioica Stinging nettle	Leaves			*			
Vaccinium myrtillus Blueberry	Fruits and seedlings	*					
Viburnum opulus Viburnum ordinary	Fruits and seedlings	*					

Note: areas of residence of Russians: Ba - Babaevsky, Bz - Belozersky, Br - Borovichsky, De, Dn - Dedovichsky and Dnovsky, Sbzh - Sebezhsky, Sp - Spirovsky; sp. - the plant is defined to the genus, the species of which, for various reasons, are not distinguished by the local population.

Table 3

Use by Karelians as edible plants of species of local flora

Latin name of the species	Used organs plants	Areas where Karelians live		
		Tx	Ol	sp
Aegopodium podagraria Snyt vulgaris	Aboveground part		*	
Aegopodium podagraria Snyt vulgaris	Leaves			*
Anthriscus sylvestris Kupyr forest	underground organs		*	
Anthriscus sylvestris Kupyr forest	trunk, stem			*
Atriplex sp. Quinoa	Aboveground part			*
Atriplex sp. Quinoa	seeds			*
Betula sp. Birch	Juices, resins, tar		*	*
Calla palustris Marsh calla	underground organs		*	
carum carvi Caraway	seeds		*	*
Chamaenerion angustifoliurn Ivan-tea narrow-leaved	Leaves	*	*	*
Cichorium intibus Chicory ordinary	underground organs		*	
Empetrum nigrum Crowberry black	Fruits and seedlings		*	
Eqisetum arvense Horsetail	Aboveground part			*
Fragaria vesca Wild strawberry	Fruits and seedlings	*		*
Humulus lupulus Hops curly	Fruits and seedlings	*	*	*

Hypericum sp. St. John's wort	Aboveground part	*	*	
Malus sylvestris forest apple tree	Fruits and seedlings	*	*	*
Mentha arvensis field mint	Aboveground part			*
Origanum vulgare Oregano	Aboveground part	*		
Oxalis acetosella Oxalis ordinary	Leaves		*	
Oxycoccus sp. Cranberry	Fruits and seedlings	*	*	*
padus avium Common bird cherry	Flowers and inflorescences	*		
padus avium Common bird cherry	Fruits and seedlings	*	*	*
Pinus sylvestris Scotch pine	Bark		*	
Potentilla erecta Potentilla erect, galangal	underground organs			*
Quercus robur Pedunculate oak	Leaves			*
Ribes sp. Currant	Leaves		*	*

Table 3 (continued)

Latin name of the species	Used organs plants	Areas of residence Karelians		
		Tx	Ol	sp
Ribes sp. Currant	Fruits and seedlings	*	*	*
Rubus chamaemorus Cloudberry	Fruits and seedlings		*	
Rubus idaeus Raspberry ordinary	Branches, shoots			*
Rubus idaeus Raspberry ordinary	Fruits and seedlings	*	*	*
Rumex sp. Sorrel	Leaves	*	*	*
Sorbus aucuparia Mountain ash	Fruits and seedlings	*	*	*
Sphagnum sp. Sfangum, peat moss	whole plant		*	
Stellaria media Chickweed medium, wood lice	Aboveground part		*	*
Trifolium sp. Clover	Aboveground part		*	
Trifolium sp. Clover	Flowers and inflorescences		*	*
Tussilago farfara Common coltsfoot	Leaves		*	
Typha laufolia cattail broadleaf	underground organs		*	

Urtica dioica Stinging nettle	Leaves	*	*	*
Vaccinium myrtillus Blueberry	Fruits and seedlings	*	*	*
Vaccinium uliginosum Blueberry	Fruits and seedlings	*	*	*
Vaccinium vitis-idaea Cowberry	Fruits and seedlings	*	*	*

Note: Karelian areas of residence: Tkh - Tikhvinsky, Ol - Olonetsky, Sp - Spirovsky; sp. - the plant is defined to the genus, the species of which, for various reasons, are not distinguished by the local population.

It has been shown that the Karelians, as well as the Vepsians [15], living in different regions, have no unity in the issue of including plants of the local flora in the diet. It is shown that the same species of Karelians from different regions are not always used in the same way for food.

Only the Karelians of the Olonets region remember eating Sphagnumsp. and cambial layerPinus syl-vestris, underground organs of Anthriscus sylvestris, Calla palustris and Typha latifolia. Here they eat the fruits of Empetrum nigrum and Rubus chamaemorus, the leaves of Oxalis acetosella and Tussilago farfara, and drink a decoction of the underground organs of Cichorium intibus. In Spirovskoye area are aware of eating the leavesAegopodium podagraria, stems of Anthriscus sylvestris, aerial parts and seeds Atriplexsp., aerial partsEqisetum arvense and Mentha arvensis, underground bodiesPotentilla erecta, Quercus robur leaves. Only for the Tikhvin Karelians is known food application of the aerial partOriganum vulgare and Padus avium flowers.

As can be seen from the data in Table. 4, the use of 39 plant genera and species was noted in total. Of these, according to the literature data, Russians use 33 taxa. In the Babaevsky district, 4 species are used, in Belozersky - 11, in Borovichsky - 11, in Dedovichsky and Dnovsky - 4, in Sebezhsky - 1, in Spirovsky - 10, in Shenkursky - 5. Most often, the Russian population eats leaves (14 applications) and fruits (15 applications), in 11 cases the aerial part is used, in 3 - underground organs, in 2 - stems and seeds, and the use of the whole plant was noted 1 time.

Table 4

Use by Russians, as edible plants, of local flora species

Latin name of the species	Used plant organs	Areas where Russians live						
		Ba	Bz	Br	De,Dn	Sbzh	sp	W
Angelica sylvestris Angelica forest	trunk, stem		*					
Atriplex sp. Quinoa	Aboveground part		*					
Atriplex sp. Quinoa	seeds						*	
Betula sp. Birch	Leaves						*	
Betula sp. Birch	Juices, resins, tar		*	*				
carum carvi Caraway	seeds						*	
Corydalis solida corydalis dense	underground organs	*						
Fragaria vesca Wild strawberry	Leaves		*	*			*	

Fragaria vesca Wild strawberry	Fruits and seedlings		*	*				
Humulus lupulus Hops curly	Fruits and seedlings						*	
Hypericum sp. St. John's wort	Aboveground part						*	
Lonicera pallasii honeysuckle pallas	Fruits and seedlings							*
Oxalis acetosella Oxalis ordinary	Leaves			*				
Oxycoccus palustris marsh cranberry	Fruits and seedlings	*	*	*				
padus avium Common bird cherry	Fruits and seedlings	*	*	*				
Ribes sp. Currant	Leaves		*	*				*
Ribes sp. Currant	Fruits and seedlings			*				
Rubus arcticus Princess arctic	Leaves	*						
Rubus arcticus Princess arctic	Fruits and seedlings		*					
Rubus chamaemorus Cloudberry	Fruits and seedlings		*					
Rubus idaeus Raspberry ordinary	Branches, shoots		*				*	
Rubus idaeus Raspberry ordinary	Fruits and seedlings		*				*	
Rumex sp. Sorrel	Aboveground part							*
Rumex sp. Sorrel	Leaves		*		*		*	*
Sorbus aucuparia Mountain ash	Fruits and seedlings							*
Stellaria media Chickweed medium, wood lice	Aboveground part			*				
Trifolium sp. Clover	Leaves			*				

Table 4 (continued)

Latin name of the species	Used plant organs	Areas where Russians live						
		Ba	Bz	Br	De,Dn	Sbzh	sp	W
Urtica dioica Nettle dioecious	Leaves			*	*			
Vaccinium myrtillus Blueberry	Fruits and seedlings			*	*	*	*	*
Vaccinium vitis-idea Cowberry	Fruits and seedlings			*	*		*	

Note: areas of residence of Russians: Ba - Babaevsky, Bz - Belozersky, Br - Borovichsky, De, Dn - Dedovichsky and Dnovsky, Sbzh - Sebezhsky, Sp - Spirovsky, Sh - Shenkursky; sp. - the plant is defined to the genus, the species of which, for various reasons, are not distinguished by the local population.

Only in the Babaevsky district, the Russian population uses nodulesCoridalis solida and leaves

Rubus arcticus. In the Belozersky district, the stems of Angelica sylvestris and above-ground partAtriplexsp. In the Borovichi district, the aerial part is used for food.Stellaria media and Trifolium leavessp. In the Spirovsky district, seeds are used as food plants. Atriplexsp., leaves Betulasp., seedsCarum carvi, inflorescence of Humulus lupulus, aerial part of Hypericumsp. In the Shenkur region, the aerial part is used for foodRumexsp and fruitsLonicera pallasii.

Karelians of the Olonetsky district and the Tver region from diarrhea gave cattle a decoction of seedAlnus sp., aerial partsRumex confertus and Chamaenerion angustifolium and bark of Quercus robur.

Of the significant number of flora species indicated for the macroregion of the North-West of the European part of the Russian Federation (2730 taxa of vascular plants) [22, 23], the peoples in question use less than one percent as food and for the needs of traditional medicine and personal hygiene.

On the example of Karelians and Russians living in a number of regions in the North-West of Russia, quite tangible differences can be traced in the use of plants both for nutrition and for medical (in folk medicine) and hygienic purposes.

The work was carried out as part of the implementation of the state task according to the thematic plans of the Botanical Institute. V.L. Komarov RAS on the topics: Herbarium collections of BIN RAS (history, study, preservation and replenishment) and 52.5. Collections of living plants of the Botanical Institute. V.L. Komarov RAS (history, current state, prospects for development and use).

CONCLUSIONS

1. A complex of ethnobotanical studies was carried out in a limited area of the North Western Federal District of the European part of Russia among the Karelians living compactly in the Leningrad Region and the Russians living with them.

2. Differences in the use of the same plant species of local flora in as useful - food and medicinal.

3. It was revealed that one people living in different administrative regions of the same and of the same federal district, uses various species and a different number of plants as food and medicinal in folk medicine.

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