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Short report

Ethnobotanical knowledge of the Istro-Romanians of Žejane in Croatia

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Abstract

An ethno-pharmacognostic survey was carried out in one of the smallest ethnic and linguistic groups in Europe: the Istro-Romanians of the village of Žejane (in Croatia), which has a population of approximately 140 persons, mainly elderly. Using an intensive field participant observation methodology, we recorded about 60 remedies of the local folk pharmacopoeia, and mainly derived from plants. Among them, the uncommon traditions to use homemade vinegar from wild apple (*Malus sylvestris*) and Cornelian cherries (*Cornus mas*) for diverse medical purposes, and houseleek (*Sempervivum tectorum*) against ear pains have been briefly discussed.

Keywords: Ethnobotany; Istro-Romanians; Croatia

Study area. The area that was investigated in this study is located in the North-Eastern part of the Istrian peninsula (Fig. 1), in Croatia. This inland karstic territory, characterized by numerous dolines, is called in Croatian Čičarija (in Italian Ciceria),

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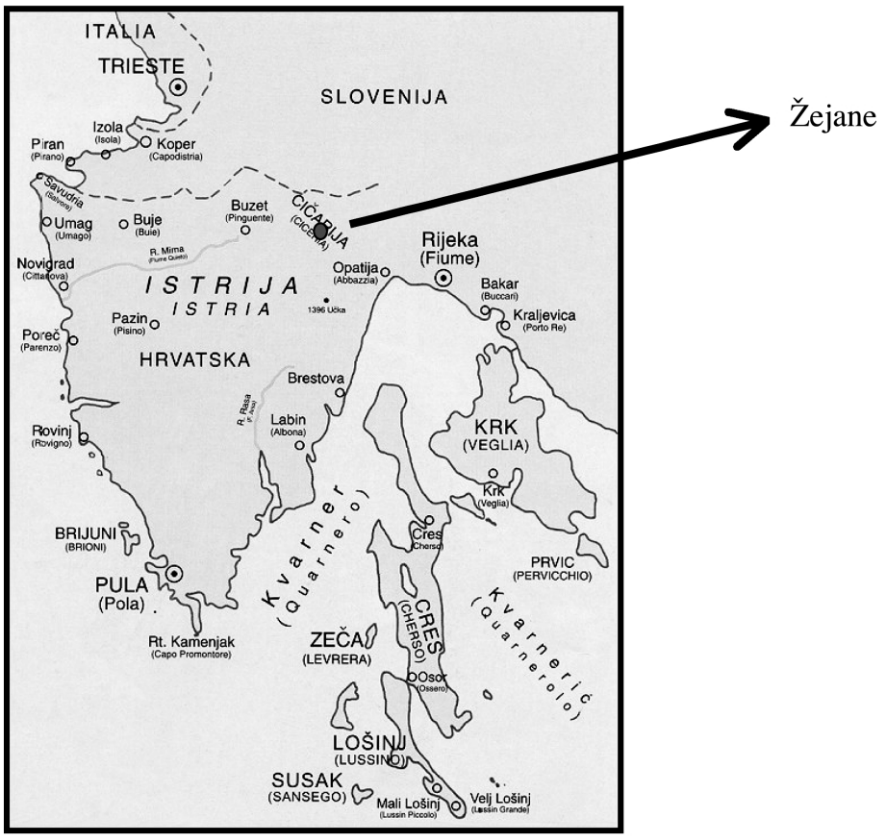

Fig. 1. Location of the studied area.

and presents a typical mountainous and sub-alpine flora. We concentrated our field study in the small village of Žejane (in the local language known as Žejàn), inhabited by one of the smallest ethnic and linguistic group of the world: the Istro-Romanians.

Population. The population of Žejane (about 140 inhabitants at present) is Istro-Romanian. In the nearby regions they were known during the past as 'Čiribirci' in Croatia, and 'Cicci' in Italy. Their original language belongs to the Romanian group, together with proper Romanian, Macedo-Romanian or Arumanian, and Meglено-Romanian or Meglenitic [1] and is listed in the UNESCO Red Book of Endangered Languages as 'seriously endangered' [2].

Istro-Romanian is classified by linguists in two subgroups: the dialect called locally 'žejànski', and spoken only in Žejane, and the dialect called locally 'vlåški' and spoken in a few centres on the southern side of the Učka Gora mountain

(Monte Maggiore) located ca. 80 km south of Žejane: Šušnjevica (Susńevicę or Šušńevicę in Istro-Romanian), Nova Vas (Noselo or Nosela in Istro-Romanian), Brdo (Bȃrda in Istro-Romanian), Jesenivik (Sucòdru in Istro-Romanian) and a few other very small villages consisting of no more than 10 households [3,4].

This group probably arrived in Istria around the 14th century (the first records of them date back to 14–15th century [5]) from the Carpathian basin, and were dedicated to pastoral activities. For many years, these Romanian populations have inhabited an area between the Austrian Empire and the Republic of Venice, and became well known in Istria as charcoal burners, coalmen, vinegar producers and traders [6].

Aim of the study. The scope of this field research was to study the use of folk-medical practices among the few remaining people of Źejane.

Previous knowledge on local folk medicine. No ethnobotanical work has been carried out in Istria in the last century. Only a very small folkloric survey was carried out in the 1970s [7], as well as taxonomic-botanical studies [8]. Among the Istro-Romanians, only a phytolinguistic survey on the 'vlåški' dialect has been recently conducted [9], as well as an ethnolinguistic survey on bird and insect names [10,11].

Methodology. The fieldwork was conducted over a period of four weeks in August 2002, with the last remaining elderly population of the village of Žejane. Only old people, native of the village and still speaking in their daily domestic life as Istro-Romanian, were interviewed. Ethnobotanical, ethnopharmaceutical and ethnomedical information were collected using participant observation method and semi-structured interviews [12] with 31 persons (17 women and 14 men, aged between 49 and 82), who still retain traditional knowledge (TK) or remembrances of these practices. Voucher specimens of non-domesticated medicinal plants were identified and stored together with more than 40 h of tape, photos and audio–video records at the first author's address. Botanical nomenclature follows the standard works of the Italian and Istrian flora [8,13].

Results. Natural ingredients representing the folk pharmacopoeia of the Istro-Romanians of Žejane are reported in Table 1 (plants) and Table 2 (animal and other non-locally produced ingredients). In the transcription of the vernacular names of the plants, Istro-Romanian transcription rules were used [4,9]. Frequency of quotation, disappeared uses, and prevalence of female or male expertise for each taxon were recorded as well.

Table 1
Plant remedies of the folk pharmacopoeias of the Istro-Romanians of Žejane in Croatia

Botanical taxon (and voucher specimen code)	Botanical family	Istro-Romanian name(s) recorded in Žejane	Status	Quotation frequency	Part(s) used	Preparation	Administration	Claimed medical use
Abies alba Mill. (ZEJABI)	Pinaceae	ielva	W	♣	resin (*şmóle̦*)	–	topical application	antiseptic (also in veterinary)
Achillea millefolium L. (ZEJACH)	Compositae	odulina	W	♣♣	flowering tops	decoction	drunk	anti-obesity and digestive
Allium sativum L.	Liliaceae	ai	C	♣♣	bulbs (*şcopí*)	oleolite	drunk	vermifuge
Artemisia absinthium L. (ZEJART1)	Compositae	pèlen; pelin	W	♣♣♣	aerial parts	decoction	drunk	digestive
Artemisia vulgaris L. (ZEJART2)	Compositae		W	♣	aerial parts	decoction	drunk	digestive
Beta vulgaris L.	Chenopodiaceae	blitva	C	♣♣	leaves	–	cooked	depurative
Betula pendula Roth (ZEJBET)	Betulaceae	vrba	W	♣♣	young leaves	decoction	drunk	anti-arthritis
Brassica oleracea L.	Cruciferae	capùz	C	♣♣	leaves	–	topical application (back side of the leaf in contact with the skin)	cicatrising
				♣♣♣	aerial parts	liquid remaining from the fermentation process for producing Sauerkraut (*ve̦rze*)	drunk	to heal haemorrhoids (*taboo*: women in childbirth should avoid its use otherwise the baby could get an intestinal colic)
		coruta		♣♣♣	leaves	–	fodder	veterinary: nutraceutical for swine
Carum carvi L. (ZEJCAR)	Umbelliferae	kimel	W	♣♣♣	fruits	decoction; macerate in *raki*	drunk	digestive
Centaurium erytrhaea Rafn. (ZEJCEN)	Gentianaceae	tåvžântróže	W	♣	aerial parts	decoction	drunk	digestive
Chelidonium	Papaveraceae	snoìniţa	W	♣	latex	–	topical application	anti-warts

Table 1 *(Continued)*

Botanical taxon (and voucher specimen code)	Botanical family	Istro-Romanian name(s) recorded in Žejane	Status	Quotation frequency	Part(s) used	Preparation	Administration	Claimed medical use
majus L. (ZEJCHE)								
Cornus mas L. (ZEJCOR)	Cornaceae	corn	W	♣♣♣*	fruits	fermented to produce vinegar (*oţet*)	see *Malus sylvestris*	see *Malus sylvestris*
				♣	fruits	syrup	drunk	nutraceutical
Cucurbita pepo L.	Cucurbitaceae	ţìcvę	C	♣♣♣	fruits	–	fodder	veterinary: nutraceutical for swine
Euphorbia sp.	Euphorbiaceae	iârba de şerpe	W	♣♣	latex	–	topical application	anti-warts
Fragaria vesca L. (ZEJFRA)	Rosaceae	fråžica	W	♣	fruits	–	consumed	nutraceutical
Juniperus communis (ZEJJUN)	Cupressaceae	smrića	W	♣*	galbules (*briń*)	distilled oil	external application	anti-rheumatic
Malus sylvestris MILL. (ZEJMAL)	Rosaceae	lìsnic	W	♣♣*	fruits	fermented to produce vinegar (*oţet*)	drunk	anti-obesity
				♣♣♣*			heated and topically applied	anti-bruises (also in veterinary)
				♣♣♣*			heated and topically applied by a cloth on feet or hands	anti-fever
				♣♣*			topically applied	to heal headache
				♣♣			fodder	veterinary: nutraceutical for swine
Matricaria recutita L. (ZEJMAT)	Compositae	camomila	W	♣♣	flowering tops	decoction	drunk	digestive; tranquilliser; vermifuge (children)
Medicago sativa L. (ZEJMED)	Leguminosae	iârba şpâgňa	W	♣♣	aerial parts	–	fodder	veterinary: nutraceutical for rabbits
Plantago lanceolata L. (ZEJPLA)	Plantaginaceae	bucviţa	W	♣♣	leaves	–	topical application	cicatrising
Prunus domestica L.	Rosaceae	čespa; sliva	C	♣♣	fruits	distillate	topical application	cicatrising
Rosa canina L. (ZEJROS)	Rosaceae	şípâc	W	♣♣	pseudofruits	decoction	drunk	depurative
Rubus idaeus L. (ZEJRUB1)	Rosaceae	målinița	W	♣♣	fruits	–	consumed	nutraceutical

Table 1 *(Continued)*

Botanical taxon (and voucher specimen code)	Botanical family	Istro-Romanian name(s) recorded in Žejane	Status	Quotation frequency	Part(s) used	Preparation	Administration	Claimed medical use
				♣		syrup	drunk	nutraceutical
Rubus ulmifolius SCHOTT. (ZEJRUB2)	Rosaceae	mùrgvâ	W	♣♣♣	fruits	–	consumed	nutraceutical
				♣		syrup	drunk	nutraceutical
Rumex acetosella L. (ZEJRUM)	Polygonaceae	kiseliţa	W	♣♣	whole aerial parts with seeds	dried	fodder, mixed with wheat bran	veterinary: anti-diarrhoeic for cattle
Sambucus nigra L.	Caprifoliaceae	bsga	W	♣♣	fruits	decoction	drunk	anti-fever
				♣♣♣	flower	syrup	drunk	nutraceutical
Secale cereale L.	Graminae	secåra	C	♣♣♣*	seeds → flour (*faríre de secâra*)	cooked with water and potatoes	consumed	roborant
Sempervivum tectorum L: (ZEJSEM)	Crassulaceae	pičór de galíre̦	W	♣	leaf juice	–	instilled in the ear	to heal pains of the ears
Solanum tuberosum L.	Solanaceae	cumpìr	C	♣♣	tubers	cut in slices	topical application	anti-headache
				♣♣♣		cooked with rye flour and water	consumed	roborant
Taraxacum officinale Weber (ZEJTAR)	Compositae	divlia radice; maslačac	W	♣♣	flowers	'honey' (obtained cooking the flowers with sugar)	consumed	antitussive
				♣♣♣	whorls	–	consumed	nutraceutical
Tilia cordata MILL. (ZEJTIL)	Tiliaceae	lìpa	W	♣♣♣	flowers	decoction	drunk	non specified
Trifolium sp. pl.	Leguminosae	trefoi; dìtel'à	W	♣♣	aerial parts	–	fodder	veterinary: nutraceutical for rabbits, cattle, swine
Triticum aestivum L.	Graminae	grâv	C	♣♣	seeds → flour (*faríre de fârmenta*)	food preparation made by cooking together flour, butter, butter, sugar, eggs and water	consumed	galactagogue
			C	♣	seeds → flour	food preparation made by boiling wheat flour and milk	consumed	roborant (children)
Urtica dioica L. (ZEJURT)	Urticaceae	copriva; urzica	W	♣	leaves	boiled	consumed	nutraceutical

Table 1 *(Continued)*

Botanical taxon (and voucher specimen code)	Botanical family	Istro-Romanian name(s) recorded in Žejane	Status	Quotation frequency	Part(s) used	Preparation	Administration	Claimed medical use
Vaccinium myrtillus L. (ZEJVAC)	Ericaceae	iâvorica	W	♣♣	fruits	–	food	nutraceutical
Viscum album L. (ZEJVIS)	Loranthaceae	bìsk	W	♣*	aerial parts before fructification	macerate in *raki* with honey	drunk	digestive
Zea mais L.	Graminae	grìs	C	♣♣♣	seeds → flour (*faríre de griz*)	cooked with water and potatoes	consumed	roborant

Status: C: cultivated; W: wild.

Quotation frequency: ♣quoted by less than 10% of the informants; ♣♣: quoted by more than 10% and less than 40% of the informants; ♣♣♣: quoted by more than 40% of the informants; *: disappeared use.

Table 2
Animal, mineral, and other remedies used in folk medical practices among the Istro-Romanians of Žejane in Croatia

Ingredient	Quotation frequency	Preparation	Administration	Claimed medical use
black ribbon	♣♣	–	knot on the skin	anti-warts
cattle faeces	♣*	–	topical application	to heal burns
coal	♣♣♣*	putting water on hot coal, and playing a special formula (while making three time the Holy Cross)	washes	against the evil eye (*uróki*)
grape distillate (*raki*)	♣♣	–	topical application	cicatrising
grape vinegar (*oţet*)	♣	–	see Malus sylvestris	see *Malus sylvestris*
milk cream	♣	–	topically applied	to heal psoriasis
ritual	♣♣*	–	one has to ask the ill person: 'What are you doing?'; he/she has to answer: 'I cut barley', and simulating this action; all that has to be repeated for three times	to heal sty (*orz*, same name used for barley)
salt	♣♣	mixed with water and straw	fodder	veterinary: roborant for cattle
snake skin	♣*	roasted on the pot, then an infusion is prepared	drunk	against high fever
	♣*	–	consumed	to heal lunge diseases
soil	♣*	–	leg kept into the soil	against viper bite in the leg
sugar	♣	heated in a pot (sometimes with a few drops of olive oil), often adding milk	consumed/drunk	antitussive
wine	♣♣♣	boiled wine with bread and sugar	consumed	galactagogue

Quotation frequency: ♣: quoted by less than 10% of the informants; ♣♣: quoted by more than 10% and less than 40% of the informants; ♣♣♣: quoted by more than 40% of the informants; *: disappeared use.

Conclusions. The folk pharmacopoeia of the Istro-Romanians of Žejane present elements of diverse origin: uses, which are very common in the Austro-German area (caraway, *Carum carvi*; sauerkraut, fermented *Brassica oleracea*; wormwood, *Artemisia absinthium*; silver fir, *Abies alba*; juniper, *Juniperus communis*) [14], others maybe also learnt and acquired from the Croatians and even which have been widely documented in the past in a broad Central European area [15] (wormwood, dandelion flowers, *Taraxacum officinale*; elderberry flowers, *Sambucus nigra*), and others coming from the Venetian coastal area (grape distillate, wine).

Nevertheless, we also recorded uses that seem to suggest the permanence of a few signs of a possible original Romanian folk pharmacopoeia. The most interesting of these recorded practices regards *Sempervivum tectorum* (houseleek), used among the Istro-Romanians against ear pains, and the a few medicinal uses of homemade vinegar.

A similar use of *S. tectorum* was recorded in Tuscany [16]; recently, polyphenols from this species have shown antimicrobial activity [17], while the antioxidant [18] and liver protecting activity of its extracts [19,20] have been previously demonstrated.

Vinegar was traditionally produced in Žejane from wild apples (*Malus sylvestris*) and Cornelian cherries (*Cornus mas*). Informants told us that only later in the 20th century they began to buy grape vinegar from the Italo-Venetians along the Istrian coasts (vines were never cultivated in Čičarija) and continue in this other way their very old tradition of transporting it to the markets of Trieste and Vienna. The use of vinegar, whose homemade production is frequently mentioned in the Romanian folklore [21], is used in the studied area internally as anti-obesity product, and externally against bruises, fever and headache. This phenomenon should be further investigated in order to understand also the difference in the phytochemistry between grape vinegar and wild apples and Cornelian cherries vinegar. Folk medical practices are represented in Žejane in a mainly female domain, as field studies in other Mediterranean areas [22] have also pointed out: men's expertise is generally circumscribed to veterinary practices, and only rarely, as in case of distillates, play a role in the traditional knowledge related to the domestic cosmos.

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