Original Research Article

Natural medicinal plants of Karakalpakstan used in folk medicine

Abstract: The article analyzes ethnobotanical data on the use of natural medicinal plants in Karakalpakstan. Currently, there are 63 families of naturally growing medicinal plants in the region, 444 species belonging to 240 genera, which is 40% of the total flora. The use of herbs identified in the course of interviews with physicians in the form of questionnaires on the use of these medicinal plants in folk medicine.The abstract should be a complete summary of definite segments i.e. Introduction, objectives, materials and methods, results and conclusion.

Key words: Karakalpakstan, (does not qualify as a key word if it is a name of a location) natural medicinal plants, life forms, local names.(These words are not in the abstract)ethnobotany.

INTRODUCTION

The Republic of Karakalpakstan is located in the northwestern part of Uzbekistan, with an area of 167.1 thousand square kilometers, or more than 37 percent of the entire territory of Uzbekistan. Karakalpakstan is delimited from the north and northeast of the country by Kazakhstan, from the east and southeast by the Bukhara region, from the south by Turkmenistan and the Khorezm regions.

The territory of Karakalpakstan is 167.1 thousand km^2.(REPEATED) The northern and southern coordinates of the Republic of Karakalpakstan are 40^0 55` and 45$^0$ 35` in northern latitude, as well as in the western and eastern latitudes, the most extreme points occupy 56^0-62.5 and 45^0 351 eastern lengths. Karakalpakstan includes Ustyurt, Kyzylkum and the lower reaches of the Amu Darya, as well as a complex of sandy-saline landscapes of Aralkum.SHIFT THE INFORMATION IN PARAGRAPH 1 AND 2 OF INTRODUCTION TO FIRST PART OF MATERIALS AND METHODS. THIS DESCRIBES THE STUDY SITE.

The flora and vegetation of the territory of Karakalpakstan has been studied by many scientists: ~~S.~~ Erezhepova (1978), ~~O.N.~~Korovin*et al.* (1983), ~~B.Sh.~~Sherbaev (1978; 1982; 1988) and others.?The studies carried out by ~~B.Sh.~~Sherbaev (1988) in recent years. It is of great importance, he noted the presence of 1110 species of higher plants for this territory, which belong to 467 genera and 97families. A thorough analysis of this flora makes it possible to isolate medicinal plants from them.

There is need for a carefully detailed introduction on the historical background of the utilization of folk medicine in this part of the world.

Today, the need for drugs derived from natural plants is increasing. (REFERENCE?). Currently, 60% of medicinal plants used in scientific medical practice are productsisolated from plants. (REFERENCE ?) For example, almost 100% of cardiac preparations are made from plants (*Valerianaofficinalis* L., *Leonuruspanzerioides*M.Pop.,*Digitalis purpurea* L.). As indicated in scientific sources,(REFERENCES) medicines made from natural plants have some advantages from drugs made artificially (REFERENCES?). Medicinal products made up of herbal products are harmless[1].

MATERIALS AND METHODS

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In determining the Latin names of families, genera and species of medicinal plants distributed in the foothills of the Karakalpakstan: S.K.Cherepanov[7] also published the International Plants Names Index (www.ipni.org) [8], www.plantarium.ru [9], and The Plant List (www.theplantlist.org) [10]. In determining: Plants determiner of Central Asia [5], data were used.Rephrase this sentence for clarity

Based on the research and data collected during the scientific expedition, we report the following.(Delete this sentence) In order to collect information about medicinal plants used in folk medicine on the territory of Karakalpakstan and their use in the treatment of various diseases, interviews were conducted with 16 local residents from different regions(name the regions).During the conversations, the most widely used medicinal plants, their medicinal properties and methods of application in medicine were recordedstudied. Fifty50species of medicinal plants, their medicinal properties and use in medicine were returned 60 times by the local population.(what does this mean? They corresponded to Takhtakupyr (21), Chimbay (2), Kegeyli (4) and Ellikkala (13), Turtkul (20) districts [Table 1].This last sentence is part of resultshence should be shifted to the appropriate section.

How was the data collected? By questionnaire? This should be made clear.

RESULTS AND DISCUSSION

According to the available reviews, the use of medicinal plants in the treatment of diseases of the local population is associated with colds (15), diarrhea (9), digestive diseases (15), lowering blood pressure (8), hepatitis (6), pain relief (2), boosting immunity (5) times.Rephrase this sentence to read:According to the available reviews, medicinal plants have been used by the local population for the treatment of diseases associated with colds (15), diarrhea (9), digestive diseases (15), lowering blood pressure (8), hepatitis (6), pain relief (2)and boosting immunity (5) times.Herbarium specimens of these plants were collected, their geographic coordinates were determined and photographed, reflecting the points of their growth in natural conditions. SHIFT TO METHODOLOGY.

Among plants with medicinal properties, locals call *Glycyrrhizaglabra* L.,*Polygonum aviculare* L.,*Capparis herbacea* Willd,*Capsella bursa-pastoris* (L.) Medic.,*Centaurum spicatum* L.,*Cichorium intybus* L.,*Cistanche salsa* (C.A. Mey.) G. Beck,*Tribulus terrestris* L.,*Salsola richteri* (Moq.) Karel ex Litv. (Are these local or scientific names? They sound scientific but the sentence indicates they are local names.)The most widespread was Rheum tataricum L., of which in medicine for digestion, diarrhea, pain in the intestines, kidneys. When blood pressure occurs, it is used to relieve pain, diarrhea, colds, toothache. When blood pressure occurs, with diarrhea, in the treatment of peptic ulcer, bolus in the intestines, kidneys. when widely used, other species have local characteristics depending on the degree of use.Rephrase this paragraph. As it is, clarity lacks. English grammar seems a major concern as well.

Table 1 Medicinal plants of Karakalpakstan used in traditional medicine

№	Family	Botanical name	Herbarium samples voucher(KK)
1	MalvaceaeJuss.	*Althaea armeniaca L.*	specimen voucher A.Baxiev, 23.06.1977
2	Fabaceae	*Alhagi pseudalhagi*(M. Bieb.) Desv.	specimen voucher A.Baxiev, 29.06.1974
3		*Anabasis aphylla L.*	specimen voucher A.Baxiev,

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			25.06.1977
4	Apocynaceae	*ApocynumscabrumRussan.*	specimen voucher B.Saribayev 28.06.1988
5	Asteraceae	*ArtemisiaannuaL.*	specimen voucher G.Abdiniyazova 26.06.2015.
6		*Artemisia vulgaris L.*	specimen voucher B.Saribayev 18.06.1989
7		*BidenstribartitaL.*	specimen voucher B.Saribayev 18.06.1979
8		*Centaurum spicatum L.*	specimen voucher B.Saribayev 19.06.1976
9		*CichoriumintybusL.*	specimen voucher G.Abdiniyazova 25.06.2015.
10		*Xanthium strumarium*	specimen voucher B.Saribayev 22.06.1989
11	Asparagaceae	*AsparagusofficinalisL.*	specimen voucher G.Abdiniyazova 26.06.2015.
12	Capparaceae	*CapparisherbaceaWilld.*	specimen voucher A.Baxiev, 20.06.1977
13	Brassicaceae	*Capsella bursa-pastoris (L.) Medik.*	specimen voucher B.Saribayev 18.06.1994
14		*ErucasativaMill.*	specimen voucher B.Saribayev 22.05.2015
15	Chenopodiaceae	*Chenopodium vulvaria*	specimen voucher specimen voucher G.Abdiniyazova

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			25.06.2014.
16		*Chenopodium album*	specimen voucher B.Saribayev 25.05.1994
17		*Haloxylonammodendron (C.A. Mey.) Bunge*	specimen voucher A.Baxiev, 25.06.1977
18		*Salsolarichteri(Moq.) Karel ex Litv.*	specimen voucher A.Baxiev, 20.06.1977
19		*Salsola paletzkianaLitv.*	specimen voucher B.Saribayev 22.05.1994
20	Orobanchaceae Vent.	*Cistanche salsa (C.A. Mey.)G.Beck*	specimen voucher B.Saribayev 29.06.1989.
21	AsclepiadaceaeR. Br.	*CynanchumsibiricumWilld.*	specimen voucher G.Abdiniyazova 17.06.2012.
22	SolanaceaeJuss.	*Daturastramonium L.*	specimen voucher G.Abdiniyazova 17.06.2012.
23	Elaeagnaceae	*Elaeagnus angustifolia L.*	specimen voucher G.Abdiniyazova 17.06.2012.
24	Ephedraceae	*EphedradistachyaL.*	specimen voucher G.Abdiniyazova 17.06.2012.
25	BrassicaceaeBurnett	*Erysimum canescens Roth*	specimen voucher G.Abdiniyazova 17.06.2012.
26	Apiaceae	*Ferula foetida (Bunge) Regel*	specimen voucher G.Abdiniyazova 17.06.2012.
27	Papaveraceae	*Fumaria vaillantii L.*	specimen voucher G.Abdiniyazova 14.06.2010.
28	Fabaceae	*GlycyrrhizaglabraL.*	specimen voucher G.Abdiniyazova

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29		*Medicago lupulina L.*	specimen voucher G.Abdiniyazova 17.06.2012.
30		*Melilotusofficinalis(L.)*Pall.	specimen voucher G.Abdiniyazova 17.05.2012.
31		*Sphaerophysasalsula(*Pall.) DC.	specimen voucher G.Abdiniyazova 17.06.2014.
32	SolanaceaeJuss.	*HyoscyamusnigerL.*	specimen voucher G.Abdiniyazova 18.06.2014.
33		*Lycopus europaeusMurray*	specimen voucher G.Abdiniyazova 24.05.2012. №109
34		*SolanumnigrumL.*	specimen voucher B.Saribayev 25.06.1978. №37
35	LamiaceaeLindl.	*Mentha asiatica Boriss.*	specimen voucher A.Baxiev 15.06.1989
36	Moraceae	*Morus alba L.*	specimen voucher A.Baxiev 05.06.1991
37		*Morus nigra L.*	A.Baxiev 18.06.1993
38	NitrariaceaeLindl.	*PeganumharmalaL.*	specimen voucher G.Abdiniyazova 18.06.2014. №23
39	PlantaginaceaeJuss.	*PlantagomajorL.*	specimen voucher G.Abdiniyazova 17.05.2012.
40		*Plantago lanceolata L.*	specimen voucher G.Abdiniyazova 17.06.2014.
41	Portulacaceae Juss.	*Portulaca oleracea L.*	specimen voucher G.Abdiniyazova

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42	Polygonaceae	*Polygonumaviculare L.*	specimen voucher G.Abdiniyazova 24.05.2012. №135
43		***Polygonum amphibium L.***	specimen voucher B.Saribayev 25.06.1978. №39
44		*Rheum tataricum L.*	specimen voucher A.Baxiev 15.06.1989
45	Ranunculaceae	*Ranunculus sceleratus*	specimen voucher A.Baxiev 05.06.1991
46	RubiaceaeJuss.	*RubiatintorumL.*	A.Baxiev 18.06.1993
47	Lamiaceae	*Mentha asiatica Boriss.*	specimen voucher G.Abdiniyazova 18.06.2014. №23
48	Zygophyllaceae R. Br.	*Tribulus terrestris L.*	specimen voucher G.Abdiniyazova 18.06.2015. №235
49	Urticaceae	*UrticadioicaL.*	specimen voucher G.Abdiniyazova 15.06.2014.
50	Verbenaceae	*Verbena officinalis L.*	specimen voucher G.Abdiniyazova 18.06.2014.

All the scientific names should be in italics as per classification(taxonomy) rules. Add a column for local name of each plant. The last column does seem to communicate much to the reader.

In the *Ferula foetida* (Bunge) Regel is a monocarpous plant with a height of 1.0-1.5 meters. (Kovrak-Uzbek, SassiqGewrek-Karakalpak) (photo-3). It contains 9.35-65.15% of resins, 12-48% of glue and 5.8-20% of essential oil, and from resins are extracted ferulic acid, asarezen, asarezenatanol, asarezenol and their esters with ferulic acid, as well as farnisiferol, umbelliferon compounds[1]. In sandy stony soils, in sandy soils, water is resistant. (What does this mean?) In particular, the city of Nukus in Karakalpakstan (around Achchik Lake, Sassik Lake) is distributed (What is distributed?) in the Lower Amudarya, Berdakh, Chilpik, Beruni, Sultan Uvays, Aralkum, Ustyurt plateau. Karakalpakdoctors (herbalists)? recommend taking a pure resin of this plant and rubbing it under the tongue once a day (like the head of a match).Please rephrase this paragraph.

Glycyrrhiza glabra L.- perennial herbaceous plant of the legume family - Fabaceae, from 70 to 220 cm high. From the licorice root, the following targeted drugs were obtained: (by? References) based on glycyrrhizic acid - glycyram (for the treatment of bronchial asthma,

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allergic dermatitis, eczema and other diseases), based on flavonoids - liquiriton and flacarbine(How were these components determined?) (for the treatment of gastric ulcer and duodenal ulcer)from licorice root is used as an analgesic, anti-inflammatory, choleretic and hepatoprotective, laxative, diuretic, anti-allergic and antispasmodic. Licorice root in the form of a decoction, infusion, extract or powder is prescribed as an expectorant for lung diseases accompanied by cough; as an anti-inflammatory and antispasmodic agent - with hyperacid gastritis, peptic ulcer of the stomach and duodenum; in the composition of medicinal mixtures - as a diuretic and laxative[1].

Polygonum aviculare L.- annual plant. family of the Polygonaceae. The drug is prescribed in obstetric and gynecological practice foras uterine bleeding, high blood pressure, gastritis, peptic ulcer of the stomach and duodenum, hemorrhoids, bronchitis, kidneys, liver and antiseptic.

Thus, only 80 (18.2%) species of medicinal plants growing in natural and cultural conditions are currently used in the scientific medicine of the region. When identifying new species of medicinal plants, as well as in the preparation of medicines, it is necessary to pay sufficient attention to the phylogenetic proximity of species (genera and families).(Which parts of the medicinal plants are used as remedy for the diseases mentioned?Inwhich form are they administered?)

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7. www.ipni.org.
8. www.plantarium.ru
9. http://www.theplantlist.org/
10. ~~9.~~ Write all references according to internationally acceptable format or as per the regulations of the journal

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