

Herbs for medicinal baths among the traditional Yao communities of China

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Abstract

Medicinal baths are an important traditional way to prevent and cure common diseases among the traditional Yao communities of Jinping County, Yunnan Province, SW China. Approaches of anthropology, ethnobotany, and participatory rural appraisal (PRA) were used to investigate the herbs used for medicinal baths; and 110 medicinal plant species were found to be used by local people to treat a variety of diseases, such as rheumatic diseases, skin diseases, injuries from falls and gynecopathia. Of these 110 species, 6 (5%) had not been previously identified as having medicinal properties, while 87 (79%) were newly recorded for their use in medicinal baths. These new ethnobotanical and medicinal records are a rich source of further phytochemical, pharmacological, and clinical studies on folk herbs in SW China.

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1. Introduction

The Yao ethnic group is one of the 55 minority peoples of China. For thousands of years, this group has been famous not only for its long history, wide distribution and colorful culture, but also for its strong resistance to diseases and familiarity with medicinal herbs (Liu and Ding, 1995; Li and Long, 2000; Liu, 2002). The Red-headed Yao people have been living in poorly built houses in an environment with high rainfall, short periods of sunshine, and high humidity. At the same time, they have to work hard all around the year in order to survive. These conditions, especially high humidity and strenuous working, make them susceptible to rheumatic diseases, various body pains and gynecopathia for women. Because they live in mountainous areas and the sanitation is not good, moreover, they are more likely to get injuries from falls and skin diseases. Fortunately, their ancestors developed regimens to resist these diseases, notably medicinal baths. Over time, medicinal baths became a cultural characteristic of the Yao people.

For medicinal baths, one adds proper herbal medicines to water, decocts them for a proper time, and then uses the decocted liquid to bathe in proper temperature. Medicinal baths of the Yao are not only a remedy to cure diseases, but also an important way to keep healthy. During the course of a bath, most of the effective components of medicines can directly act on the infected or diseased region, avoiding the breakage of the alimentary canal, the first pass effect of liver and side-effects to the stomach and intestines. By virtue of the temperature stimulus of the water, the herbal liquid can promote blood circulation, improve the metabolism, and enhance the immune capability of body (Li, 1991; Yu, 1991; Liu, 1994, 2002; Wang and Zhong, 2004).

There are several articles that have recorded and briefly introduced herbs used for medicinal baths among Yao communities in the Guangxi Zhuang Autonomous Region (Dai and Qiu, 1997), Hunan Province (Tang and Hu, 2000; Liu et al., 2001), and Jinping County of Yunnan Province (Deng, 2002; Long and Li, 2004). Up to now, however, there is no detailed report or research on the herbs used for medicinal baths among these communities. Therefore, this ethnobotanical study was carried out in order to: (i) document the traditional uses of plants for medicinal baths; and (ii) publicize the medicinal baths, an effective remedy, to prevent and cure diseases in the target region.

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In Jinping County of Yunnan Province there are several offshoots of the Yao ethnic group, including the Red-headed (*Hongtou* in Chinese) Yao, the Indigo-blue (*Landian*) Yao, the Plane-headed (*Pingtou*) Yao and the Sand (*Sha*) Yao (Compilation Council of Miao, Yao and Dai Nationality Autonomic County Annals in Jinping, Yunnan, 1994). Red-headed Yao women customarily wear triangle caps made of red cloth and silver loops. Being the largest sub-group in Jinping, they were selected as the key informants for this study.

2. Materials and methods

2.1. Study area

Jinping, a county located in southeast Yunnan ($22^{\circ}26'26''$ – $22^{\circ}57'44''$ N, $102^{\circ}31'36''$ – $103^{\circ}31'50''$ E) was selected as the study area (Fig. 1). The weather in Jinping is affected by the Indian Ocean and the Pacific Ocean. There is abundant rainfall, the annual average precipitation being 2330.4 mm. The area has

the largest rainfall of south Yunnan. It has long periods of fog (more than 180 days a year), heavy humidity (the relative humidity being above 85%), and a warm climate (the annual average temperature being 17.8°C). The county is a typical southern sub-tropical region, and it is rich in plant diversity (Xu et al., 2002). Every 6 days, there is herb fair in Jinping County. On that day, Yao people bring their herbs to sale, including the herbs for medicinal baths.

2.2. Ethnobotanical survey

The survey was carried out six times during different seasons over a period of 3 years in seven districts of Jinping: Shuiduichong village (where the key informant was Dr. Li Fuchao), Hetou village (Dr. Feng Wu-mei), Malutang new village (Dr. Zhao Da-mei), Taiyang village (Dr. Zhao), Bayi village (Dr. Deng), Baimahe village (Dr. Deng San-mei), and Shayipo village (Dr. Wang Yun-he). Methods of anthropology, ethnobotany and participatory rural appraisal (Lipp, 1989; Etkin, 1993;

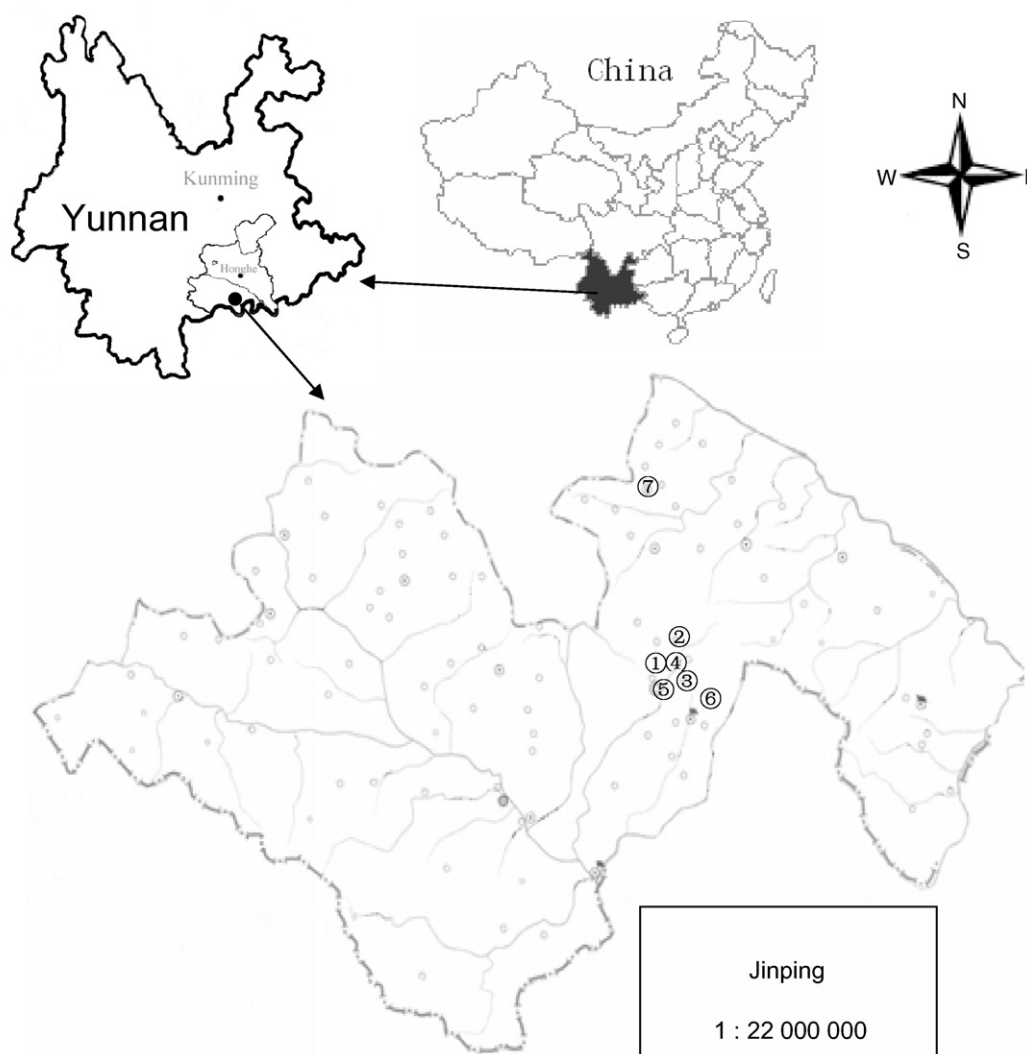


Fig. 1. Location of seven selected districts in Jinping, Yunnan province on the map (①) Shuiduichong village; (②) Hetou village; (③) Malutang new village; (④) Taiyang village; (⑤) Bayi village; (⑥) Baimahe village; (⑦) Shayipo village.

Table 1

List of herbs used for medicinal bath among the Red-headed Yao people in Jinping, Yunnan Province, China

Specimen number	Scientific name	Family name	Local name	Part used	Traditional uses and medicinal bath information in literature
99048	<i>Acorus tatarinowii</i> Schott ^a	Acoraceae	chan bou mang	Whole plant	Rheumatism, scabies; literature: Rheumatism (1,2)
99125	<i>Aerva sanguinolenta</i> (L.) Blume	Amaranthaceae	bai hua mi	Leaf and flower	Injuries from falls, rheumatic arthritis, pain in muscles
99007	<i>Aeschynanthus bracteatus</i> Wall. ex A. DC.	Gesneriaceae	di yang heng	Whole plant	Rheumatoid arthritis, postpartum convalescence, keeping healthy
99105	<i>Amaranthus spinosus</i> L.	Amaranthaceae	ci mi	Whole plant	Pruritus, abscess bleeding, hemorrhoids bleeding, eczema, scabies
06025	<i>Anodendron affine</i> Druce	Apocynaceae	shan teng	Whole plant	Rheumatism
06015	<i>Ardisia corymbifera</i> Mez	Myrsinaceae	jiwosuan	Whole plant	Gall from falls, rheumatism
06030	<i>Argyrea acuta</i> Lour. ^a	Convolvulaceae	bai bei si chou	Whole plant	Eczema, athlete's foot; literature: skin ulcer, eczema, athlete's foot (3)
99081	<i>Arisaema rhizomatum</i> C. E. C. Fischer	Araceae	xue li mi	Root and stem	Pain caused by over activity, rheumatoid numbness
99040	<i>Astilbe rivularis</i> Buch.-Ham. ex D. Don	Saxifragaceae	xi gu lian	Root, stem and whole plant	Rheumatoid arthritis, injuries from falls
99129	<i>Balanophora harlandii</i> Hook.f.	Balanophoraceae	she hu mi	Whole plant	Eliminating stasis to activate blood circulation, detumescence, hemorrhoids, uterine prolapse, injuries from falls
99051	<i>Begonia cathayana</i> Hemsl.	Begoniaceae	ge lang sui mi	Whole plant	Eliminating stasis to activate blood circulation, detumescence, injuries from falls, rheumatism and numbness, carbuncle, skin ulcer
06020	<i>Callicarpa pedunculata</i> R. Br.	Verbenaceae	qing tiao cao	Stem and leaf	Skin canker
06037	<i>Campylandra wattii</i> C. B. Clarke	Convallariaceae	yan pa teng	Whole plant	Rheumatoid arthritis
99065	<i>Caryopteris paniculata</i> C. B. Clarke	Verbenaceae	mi zui	Root and whole plant	Pruritus, erythema, pain in bones and muscles
99126	<i>Celosia argentea</i> L. ^a	Amaranthaceae	ji guan mi	Stem, leaf, flower and seed	Hemorrhoids, leucorrhea, profuse uterine bleeding; literature: eczema, acariasis (3)
06041	<i>Cissus repens</i> Lam.	Vitaceae	hui pu tao	Rattan and leaf	Bitten by viper, carbuncle, furuncle
06011	<i>Clematis armandii</i> Franch.	Ranunculaceae	ma yuo	Stem and leaf	Rheumatism, gonorrhea, amenorrhea
99021	<i>Clematis chrysocoma</i> Franch.	Ranunculaceae	di bang niao	Root, stem (little leaf)	Rheumatism, injuries from falls, lumbago, profuse uterine bleeding, health maintenance
99104	<i>Clematis fasciculiflora</i> Franch.	Ranunculaceae	hua ye pei	Root, stem, leaf	Eliminating stasis to activate blood circulation, rheumatism, bones and muscles ache, injuries from falls, bone fracture
06013	<i>Clematis fulvicoma</i> Rehd. et Wils.	Ranunculaceae	ma yuo	Stem and leaf	Rheumatoid arthritis, skin ulcer
06014	<i>Clematis loureiriana</i> var. <i>peltata</i> W. T. Wang	Ranunculaceae	ma mu you	Stem and leaf	Rheumatoid arthritis, hemiplegia
06012	<i>Clematis rubifolia</i> C. H. Wright	Ranunculaceae	mao mu tong	Stem and leaf	Rheumatism, urethritis, cystitis, menoxenia
99140	<i>Colocasia esculenta</i> (L.) Schott	Araceae	yu mi	Corn, leaf and inflorescence	Psoriasis, burn, night sweat, carbuncle, deep-rooted ulcer, detumescence, uterine prolapse, hemorrhoids
06029	<i>Combretum latifolium</i> Bl.	Combretaceae	feng che zi	Root, stem and leaf	Injuries from falls
99098	<i>Coptis chinensis</i> Franch. ^a	Ranunculaceae	ji juo mi	Root, stem	Dizziness, insomnia, burn, anthema, uterine prolapse, menoxenia; literature: ulcer on crus (4)
06045	<i>Crotalaria albida</i> Heyne	Papilionaceae	xiao gou xiang ling	Whole plant	Urethritis, cervix cancer, skin ulcer
99099	<i>Cucubalus baccifer</i> L.	Caryophyllaceae	gou jin mi	Root and whole plant	Amenorrhea, injuries from falls, rheumatism, dropsy, urinary system infection, fracture
06047	<i>Cuscuta reflexa</i> Roxb.	Convolvulaceae	wu niang teng	Bine	Rheumatism
99131	<i>Cynanchum otophyllum</i> C. K. Schneid.	Asclepiadaceae	qing yang pei	Root	Bone ache caused by rheumatoid, swirl, tinnitus, nervous, epilepsy, amenorrhea, urticaria
06021	<i>Dischidia australis</i> Tsiang et P. T. Li	Asclepiadaceae	yuo huang diao	Whole plant	Eczema, itch caused by sore, rheumatism, arthritis
99100	<i>Drosera peltata</i> Sm. ex Willd.	Droseraceae	mao hao mi	Corn and whole plant	Injuries from falls, lumbar muscle strain, rheumatoid arthritis, eczema, neurodermatitis, postpartum cramps

Table 1 (Continued)

Specimen number	Scientific name	Family name	Local name	Part used	Traditional uses and medicinal bath information in literature
99058	<i>Embelia oblongifolia</i> Hemsl.	Myrsinaceae	ze hu pei	Fruit and whole plant	Rheumatoid numbness, injuries from falls
06043	<i>Embelia parviflora</i> Wall et A. DC	Myrsinaceae	Ju ho pen	Stem and leaf	Pain in waist and legs
99128	<i>Epilobium hirsutum</i> L.	Onagraceae	liu ye mi	Root, flower and whole plant	Menoxenia, amenorrhea, too much leucorrhea, invigorate the circulation of blood, fracture, injuries from falls, furuncle, carbuncle
99114	<i>Epimeredi indica</i> (L.) Rothm.	Labiatae	guang fan feng	Whole plant	Rheumatoid arthritis, bones and muscles ache, skin ulcer, hemorrhoids, eczema
06046	<i>Equisetum hiemale</i> L.	Equisetaceae	jie jie cao	Whole plant	Feverish rheum
99023	<i>Euodia lepta</i> (Spreng.) Merr. ^a	Rutaceae	bei la gong diang	Root and leaf	Pruritus, rheumatoid arthritis, ache in waist and legs, eczema, injuries from falls; literature: leaf for eczema, dermatitis, hemorrhoids (3); pruritus in pudendum (5); pruritus (4)
99069	<i>Ficus chapaensis</i> Gagnep.	Moraceae	deng di xiu (di xiu ang)	Root, stem and leaf	Postpartum convalescence, impotence, dizziness
06016	<i>Gaultheria griffithiana</i> Wight	Ericaceae	ke sou you	Stem and leaf	Rheumatoid arthritis
99035	<i>Gaultheria leucocarpa</i> Blume. var. <i>crenulata</i> (Kurz) T. Z. Hsu ^a	Ericaceae	jian cai za	Whole plant	Invigorate the circulation of blood, rheumatoid arthritis, injuries from falls, numbness of limbs, enhance the health; literature: rheumatism (1)
99110	<i>Gelsemium elegans</i> (Gardn. et Champ.) Benth. ^a	Loganiaceae	duan chang pei	Whole plant	Eczema, scrofula, carbuncle, furuncle, injuries from falls, rheumatism; literature: eczema, ringworm, measles (3,6,7)
06035	<i>Genianthus bicoronatus</i> Klackenberg ^b	Asclepiadaceae	nai jiang teng	Whole plant	Rheumatism, skin ulcer
99004	<i>Glechoma longituba</i> (Nakai) Kuprian. ^a	Labiatae	di pou (di bi)	Stem, leaf and whole plant	Eliminating stasis to activate blood circulation, menoxenia, profuse uterine bleeding, leucorrhea, rheumatoid arthritis; literature: ulcer, eczema (7)
06042	<i>Gnetum pendulum</i> C. Y. Cheng	Gnetaceae	pen mo pen	Stem and leaf	Rheumatism, injuries from falls
99060	<i>Helwingia japonica</i> (Thunb.) Dietr.	Helwingiaceae	ye shang hua	Whole plant	Strain of lumbar muscles, rheumatoid arthritis
99056	<i>Hemiphragma heterophyllum</i> Wall.	Scrophulariaceae	di bi	Whole plant	Rheumatism, injuries from falls, rheumatic numbness, eczema, skin ulcer
99102	<i>Houttuynia cordata</i> Thunb. ^a	Saururaceae	ze er mi	Whole plant	Hemorrhoids, pyocutaneous disease cannot heal, uterine prolapse, menoxenia; literature: skin ulcer, herpes, smallpox (8)
99034	<i>Hypericum acmosepalum</i> N. Robson	Hypericaceae	xiang ge da	Root and stem	Rheumatoid numbness, injuries from falls, bone and muscle ache from rheumatoid
06028	<i>Ilex chinensis</i> Sims	Aquifoliaceae	si ji qing	Stem and leaf	Urethral system infection, scald, skin ulcer
06027	<i>Ilex godajam</i> Colebr. ex Wall.	Aquifoliaceae	san you	Stem and leaf	Injuries from falls, wrench
99006	<i>Illigera celebica</i> Miq.	Hernandiaceae	jiao dai pei	Whole plant	Rheumatoid, numbness of limbs, injuries from falls, bone fracture, health maintenance
99018	<i>Iris decora</i> Wall.	Iridaceae	xi le nie	Whole plant	Furuncle
99038	<i>Jasminum fuchsifolium</i> Gagnep.	Oleaceae	di rang eng	Whole plant	Invigorate the circulation of blood, rheumatoid arthritis, injuries from falls, rheumatoid numbness
06044	<i>Jasminum lanceolaria</i> Roxb.	Oleaceae	di ren zhui	Stem	Rheumatism, injuries from falls, fracture, tumefaction, carbuncle, wind syndrome of head
06031	<i>Jasminum yunnanense</i> Jien ^b	Oleaceae	li jiu	Stem and leaf	Rheumatic numbness, aphoria for women
06005	<i>Kadsura coccinea</i> (Lem.) A. C. Smith	Araliaceae	Hei lao hu	Root and old rattan	Rheumatism, injuries from falls
06036	<i>Kibatalia macrophylla</i> (Pierre) Woodson ^b	Apocynaceae	dixiu	Stem and leaf	Injuries from falls, rheumatoid arthritis
06039	<i>Lepistemon binectariferum</i> Kuntze	Convolvulaceae	bai mian feng	Whole plant	Skin ulcer
06022	<i>Lonicera henryi</i> Hemsl.	Caprifoliaceae	ji dan cao	Whole plant	Postpartum convalescence
99044	<i>Lysimachia christinae</i> Hance ^a	Primulaceae	guo lu huang	Whole plant	Urinary system infection (2)

Table 1 (Continued)

Specimen number	Scientific name	Family name	Local name	Part used	Traditional uses and medicinal bath information in literature
06008	<i>Lycopodium casuarinoides</i> (Spring) J.Holub	Lycopodiaceae	feng yuo	Whole plant	Rheumatism, activate the blood circulation
06009	<i>Lycopodium complanatum</i> L.	Lycopodiaceae	feng yuo	Whole plant	Rheumatism, activate the blood circulation
99039	<i>Maesa indica</i> (Roxb.) A. DC.	Myrsinaceae	ji dai za (du dai za)	Leaf and whole plant	Rheumatoid numbness, ache all over the corporeity
06010	<i>Monoclastrus monosperma</i> (Roxb.) Wang et Tang ^b	Celastraceae	du zi teng	Rattan and leaf	Rheumatoid numbness, skin ulcer
06049	<i>Murraya tetramera</i> Huang ^a	Rutaceae	qian zhi yan	Stem and leaf	Rheumatoid numbness, pain in bones and muscles, urticaria, eczema, bitten by viper; literature: pruritus, eczema (9)
06026	<i>Ophiopogon dracaenoides</i> Hook	Convallariaceae	yan jie cao	Whole plant	Rheumatoid cardiopathy
99127	<i>Oxalis corniculata</i> L. ^a	Oxalidaceae	suan jiao mi	Whole plant	Eliminate the evil wetness, urethritis, neurasthenic, injuries from falls, skin ulcer, foot ringworm, eczema; literature: scald, ringworm on feet, eczema (3)
06007	<i>Palhinhaea cernua</i> (L.) Vasc. and Franco	Lycopodiaceae	feng yuo	Whole plant	Rheumatic arthritis, activate the blood circulation
06004	<i>Passiflora wilsonii</i> Hems	Hesperocallidaceae	guo chan teng	Bine and leaf	Scabies
06034	<i>Periploca calophylla</i> (Baill.) Roberty	Asclepiadaceae	Nai jiang teng	Whole plant	Injuries from falls, rheumatism, poison score and red turgescence
99118	<i>Pinellia ternata</i> (Thunb.) Breitenb.	Araceae	ban xia mi	Whole plant	Eliminating stasis to activate blood circulation, leucorrhea
99050	<i>Piper macropodium</i> C. DC. ^a	Piperaceae	lu bi	Whole plant	Rheumatic arthritis, injuries from falls; literature: (2)
99012	<i>Piper thomsonii</i> (C. DC.) Hook. f.	Piperaceae	ji lao	Whole plant	Invigoration, mammotropic, adynamia
99045	<i>Plantago asiatica</i> L. ^a	Plantaginaceae	tang ze	Seed and whole plant	Lithangiuria, invigorate the circulation of blood, rheumatoid numbness, menoxenia; literature: (2)
99103	<i>Polygala persicariaefolia</i> DC.	Polygalaceae	yuan zhi mi	Whole plant	Eliminating stasis to activate blood circulation, injuries from falls, rheumatism, numbness, bone fracture and turgescence, burn, carbuncle, skin ulcer
99123	<i>Polygonum barbatum</i> L. ^a	Polygonaceae	mao mi	Whole plant	Eliminating stasis to activate blood circulation, alleviate pain, injuries from falls, rheumatic arthritis, muscle pain, menoxenia; literature: ulcer, athlete's foot (7)
99122	<i>Polygonum multiflorum</i> Thunb. ^a	Polygonaceae	he shou mi	Earthnut and whole plant	Dizziness, insomnia, lumbago, ache in legs and limp, postpartum bellyache, retention of blood in uterus; literature: ringworm and scabies all over the body (7)
99112	<i>Pratia nummularia</i> (Lam.) A. Br. et Aschers.	Lobeliaceae	yu dai mi	Fruits and whole plant	Rheumatism, injuries from falls
06019	<i>Premna interrupta</i> Wall. ^b	Lamiaceae	chou huang jing	Stem and leaf	Rheumatism, injuries from falls
06018	<i>Premna szemaoensis</i> P'ei	Lamiaceae	jie gu mu	Stem and leaf	Fracture, injuries from falls
99133	<i>Rabdosia lophanthoides</i> (Hamilt. ex D. Don) Hara	Labiatae	xiang cha mi	Whole plant	Gynaecopathia, leprosy
99119	<i>Ranunculus japonicus</i> Thunb.	Ranunculaceae	wu hu feng	Whole plant	Skin ulcer and ringworm, rheumatic arthritis, injuries from falls, fracture, uterine prolapse, menoxenia
99083	<i>Ranunculus sieboldii</i> Miq.	Ranunculaceae	di hu mi	Stem, leaf and whole plant	Eliminating stasis to activate blood circulation, injuries from falls, rheumatic arthritis
99030	<i>Reineckia carnea</i> (Andr.) Kunth	Liliaceae	di rang (ha di nie)	Rhizoma and whole plant	Fracture, rheumatoid arthritis, dropsy, alleviate pain, strengthen corporeity
99042	<i>Rhaphidophora decursiva</i> (Roxb.) Schott	Araceae	shan shu long	Whole plant	Eliminating stasis to activate blood circulation, injuries from falls, rheumatoid ache in waist and legs, carbuncle, skin ulcer
99010	<i>Rhaphidophora lancifolia</i> Schott ^b	Araceae	shan shu long	Whole plant (not fibre)	Rheumatoid numbness, fracture, injuries from falls

Table 1 (Continued)

Specimen number	Scientific name	Family name	Local name	Part used	Traditional uses and medicinal bath information in literature
99061	<i>Rubia cordifolia</i> L.	Rubiaceae	ji jiao ko mi	Bine	Strengthen corporeity
99062	<i>Sabia fasciculata</i> Lecomte ex L. Chen	Sabiaceae	di zang	Whole plant	Rheumatoid, numbness of limbs, injuries from falls, fracture, uterine prolapse, postpartum convalescence
06023	<i>Sambucus chinensis</i> Lindl.	Caprifoliaceae	xue man cao	Root, stem and leaf	Injuries from falls, wrenth, gall, fracture, rheumatalgia
99054	<i>Sarcandra hainanensis</i> (P'ei) Swamy et Bailey	Chloranthaceae	jiu jie feng	Whole plant	Rheumatoid numbness, ache in bone, arthritis
99027	<i>Saussurea deltoidea</i> (DC.) Sch.Bip.	Compositae	deng duo bu ai	Root, leaf and whole plant	Fracture, impotence, rheumatoid ache in bone, numbness
06006	<i>Schefflera octophylla</i> (Lour.) Harms. ^a	Araliaceae	ba jia feng	Leaf	Rheumatalgia, gall from falls, dermatitis, eczema; literature: dermatitis, eczema (3)
06002	<i>Schizomussaenda dehiscens</i> (Craib) Li	Rubiaceae	sui you	Root, stem and leaf	Urethritis
99036	<i>Senecio scandens</i> Buch.-Ham ex D. Don ^a	Compositae	qian li guan	Whole plant	Pruritus, ringworm, hemorrhoids, eczema Literature: dermatitis, urticaria, furuncle (1,6,10); wash eyes to eliminate nebula (3, 11)
99088	<i>Taraxacum mongolicum</i> Hand.-Mazz. ^a	Compositae	wu gong mi	Root and whole plant	Furuncle, skin ulcer, acute conjunctivitis, urethral system infection, postpartum bellyache, blood in uterus cannot come out; literature: dermatitis (4)
99120	<i>Thalictrum ichangense</i> Lecoy. ex Oliv. ^a	Ranunculaceae	dun ye mi	Root and whole plant	Injuries from falls; literature: wandering erysipelas (5)
06040	<i>Tinospora crispa</i> (L.) Hook.f. and Thomson	Menispermaceae	Da ye ruan jin teng	Rattan	Fracture, contusion, bitten by viper, carbuncle, furuncle
06024	<i>Trachelospermum axillare</i> Hook. f.	Apocynaceae	jiu niu teng	Stem and leaf	Rheumatalgia
06038	<i>Tripterospermum cordatum</i> (Marq) H. Smith	Gentianaceae	jinpen	Whole plant	Pain in muscles and bones
06032	<i>Uncaria homomalla</i> Miq.	Rubiaceae	gou teng	Root, stem and leaf	Rheumatism arthritis, sciatica, fracture
06033	<i>Uncaria lancifolia</i> Hutchinson	Rubiaceae	gou teng	Root, stem and leaf	Rheumatism arthritis, arthral ache
06048	<i>Uncaria scandens</i> (Smith) Hutchins	Rubiaceae	ying dou ao	Root, stem and leaf	Rheumatism arthritis, arthral ache
99053	<i>Uncaria sessilifructus</i> How ^a	Rubiaceae	ying diu	Root, stem and leaf	Rheumatism arthritis, arthral ache, hemiplegia, sciatica, injuries from falls; literature: (2)
99020	<i>Urena lobata</i> L. ^a	Malvaceae	guan jian	Whole plant	Rheumatism arthritis, uterus prolapse; literature: rheumatism arthritis (2,12)
06003	<i>Urophyllum chinense</i> Merr. et Chun	Rubiaceae	jian ye mu	Stem and leaf	Skin ulcer
06017	<i>Vaccinium bracteatum</i> Thunb. ex A.Murray	Ericaceae	mi fan guo	Root and leaf	Strengthen corporeity
99026	<i>Valeriana jatamansi</i> Jones	Valerianaceae	di fiu hua	Whole plant	Alleviate pain, rheumatism or numbness caused by draught, pain and limp in waist and knee, injuries from falls, fracture, fester
99113	<i>Verbena officinalis</i> L. ^a	Verbenaceae	ma bian mi	Whole plant	Eliminating stasis to activate blood circulation; literature: eczema, dermatitis (1,3)
99121	<i>Viola inconspicua</i> Blume	Violaceae	chang e mi	Whole plant	Alleviate pain, itch, leucorrhea, uterine prolapse
06001	<i>Zippelia begoniaefolia</i> Bl.	Piperaceae	Yaoyou	Stem and leaf	Activate blood circulation

(1) Liu et al. (2001), (2) Li and Long (2000), (3) Ministry of Health of Logistics Department of Guangzhou Army (1969), (4) Lan et al. (2004), (5) Huang (1994), (6) Honghe Health Service (1971), (7) Chinese Herbs Editorial Committee of Country's Traditional Chinese Medicine Conservancy Bureau (1999), (8) Yunnan Institute for Drug Control (1984/1990), (9) Compilation Group of Chinese Herbal Medicine Compilation (1975–1978), (10) Health Office of Kunming (1970), (11) Health Department of Guangxi Zhuang Autonomous Region (1959/1963), (12) Zhu and Liu (1995).

^a Have been recorded for their use in medicinal baths.

^b Not have been previously identified as having medicinal properties.

Hedberg, 1993; Pei and Long, 1998) were adopted for the field surveys.

During each visit, detailed field records were taken on the functions and parts of plants used. These were collected from different regions following the methodology outlined by Croom

(1983). Information was obtained through conversation with elderly villagers, local healers, and herbalists. Voucher specimens of 110 plants were collected in the field by the authors under the direction of local herbal doctors (Martin, 1995) and properly identified according to *Flora of China* and *Illustrated*

Handbook for High Plants of China (Editorial Committee of Flora Reipublicae Popularis Sinicae, CAS, 1959–2004; Institute of Botany, CAS, 1972–1983) by plant taxonomists and experts of our institute. The voucher specimens were deposited in the Voucher Herbarium of the Department of Ethnobotany, Kunming Institute of Botany, Chinese Academy of Sciences. The parts of the plants used to treat diseases, local names of the plants, and the types of diseases to be cured were carefully recorded in the field (Alba and Brito, 1996), and the efficacy of these plants was studied by way of comparison with the pertinent literature.

3. Results

3.1. Customs of taking medicinal baths in Jinping

In Jinping, everyone has the habit of taking medicinal baths. According to the folklore, in an early era when a flood submerged the whole world, Panwang and his sister, the Yao people's ancestors, remained in a boat (*pangtong*) and so could survive. Their offspring became the Yao. So in every Yao house, there is a big barrel made of Chinese fir (*Cunninghamia lanceolata*). These so-called “Pang Barrels” are used for medicinal baths. They are also called “Yellow Barrels.”

In the past, the Yao people used to bathe with medicinal herbs once a day in order to eliminate fatigue and keep healthy. Today, with improved living conditions, more medication available, and a reduced supply of medicinal plants, the number of medicinal baths has been reduced. Nowadays, the Yao generally take only one medicinal bath during each of several main festivals, for example the Dragon Boat Festival (5th May according to lunar calendar), the Double Ninth Festival (9th September) and the Panwang Festival (16th October). On the day of the Dragon Boat Festival, everyone—men, women, elders and children must have medicinal baths! One can see the Yao people enthusiastically collecting herbal medicines or buying them from local markets to have a bath, and even the local Han Chinese (the majority people of China) participate in this activity.

It is worth mentioning that Yao women customarily take medicinal baths the third day after giving birth, to help dispel cold and prevent gynecopathia. A week later they can go back to work outdoors. Medicinal baths can make babies healthy and strong, too. This is different with other Chinese ethnic groups, where most women are commonly not allowed to work until 1 month after giving birth. Maternity leave varies from 1 month to 3 months according to the law.

3.2. Method of taking medicinal baths

The method of medical baths among the Yao is a joint use of steaming and soaking.

- *Herbs*: the quantity of different kinds of herbs is not precise. It usually amounts to a small bundle, about 0.2–0.5 kg, depending on the number of persons who take the bath. Prescriptions are also not rigid. Different herbal doctors have different pre-

scriptions handed down from their ancestors, and common people just use as many herbs as they can collect.

- *Container for boiling*: usually a big iron boiler.
- *Time for boiling*: about 25–30 min.
- *Pang barrel*: specially manufactured wood container, 75–80 cm in diameter and about 80 cm high.
- *Amount of medicinal liquid*: usually 20–25 kg, just enough to submerge the shoulders when sitting.
- *Bath temperature*: usually 38–40 °C, according to a person's endurance and the season, making sure that the skin shows red and the whole body is warm and begins sweating.
- *Bath time*: usually 20–30 min. Too short a time cannot induce sweating, so that the medicine cannot be absorbed through sweat glands, while too long a time runs the danger of losing body fluids by sweating.

When taking a bath, it is good to supplement body fluids, avoid wind and cold, and knead and massage the whole body or affected part to promote blood circulation and aid in the absorption of the medicine.

3.3. Herbs used for medicinal baths

There are many herbs used for medicinal baths in Jinping. In our field investigation and specimen identification, a total of 110 species belonging to 59 families and 93 genera were collected and recorded. The species are numerous and widely distributed. Furthermore, the plants are easily collected from the local ecosystems. The family with the most species was Ranunculaceae (including 11 species of medicinal plants); the second largest family was Rubiaceae (six species); and the third largest was Araceae (five species). The medicinal uses and functions of these plants are shown in Table 1. Some rare species (e.g. *Coptis chinensis* Franch.) are used very seldom these days.

There are six species (5%) that have never been previously identified as having medicinal properties, and only 23 species have been recorded as medicinal herbs for bathing in the literature (Chinese Herbs Editorial Committee of Country's Traditional Chinese Medicinal Conservancy Bureau, 1999; Xiao and Lian, 1999; National Codex Council of China, 2000; Tang and Hu, 2000; Deng et al., 2001; Liu et al., 2001; Wang and Liu, 2002; Lan et al., 2004). Details are shown in Table 1.

4. Conclusions and discussions

In the present study, 110 species belonging to 59 families have been identified as being used for medicinal baths by healers in Jinping County, Yunnan province. These plants have different properties, such as to invigorate blood circulation, to alleviate pain, to expel wind-evil and remove wetness, to diminish inflammation, and to alleviate itching. Six species were for the first time recorded as having medicinal value; and 87 species were identified for the first time as herbs for medicinal bath. Most of the records about herbs used in medicinal baths in the literature concentrated only on skin diseases, a few on rheumatism, and

none on injuries from falls or gynecopathia. Further phytochemical, pharmacological, and clinical confirmations are needed to prove that these herbs are efficient therapeutants in medicinal baths.

Compared with the systemitized approaches of traditional Chinese Medicine, the use of medicinal baths among the Yao follows no set medical system. Both the species and quantities are not precise. Because of excessive collection and poor management, moreover, the herb resources are decreasing; and some species are now hard to find. Furthermore, since the Yao people do not have their own writing system, knowledge on medicinal baths is handed down orally; so it is difficult for them to develop a perfect medicinal system.

With the popularization of modern medical care, the frequency of medicinal baths is gradually decreasing and becoming associated with particular occasions. The Yao now usually have medicinal baths only on the Dragon Boat Festival, the Panwang Festival, and the Double Ninth Festival only. Furthermore, fewer and fewer people teach and study the herbs used for medicinal baths and the principles behind their effectiveness. The custom of medicinal baths and the knowledge about the herbs are thus in danger of extinction.

We hope that the Red-headed Yao people's tradition of medicinal baths will be expanded, that more people will engage in the study of herbs for medicinal baths in Jinping, and that medicinal baths will become one of the highlights in the health field in the future.

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