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BELTSVILLE AGRICULTURAL RESEARCH CENTER
BELTSVILLE, MARYLAND 20705

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Subject: Some Medicinal Plants That May Be Sampled In Western United States

To: Arthur S. Barclay

A review of Medicinal Uses of Plants by Indian Tribes of Nevada (Train, Henrichs & Archer, 1945 & revised in 1957) was made to determine whether there were any novelty folklore samples that could be collected during the upcoming field work in Western U.S.

Based on rationale from earlier folklore studies (unpublished manuscript), I selected 76 species from approximately 209 recorded by Train et al. One or more samples for 62 (83%) have been tested and 37% are active (23 of those tested). By extrapolation, the remaining unselected species include 103 tested and 15% active.*

Of 53 inactive species (76 selected minus 23 active), 43 plus one active seem worthy of further evaluation. These are listed in the attached table where you will also note that about 30% have never been tested. Another 35% have never been sampled according to the part of the plant used in folk medicine. For example, the above ground parts of Castilleja lineariaefolia were tested but the folk remedies specify only roots which have not been screened.

Unlike Krochmal & Krochmal (Medicinal Plants of the United States), Train et al. rarely specified the time of the year when the Indians collected their samples. But there are other kinds of information that seem to emphasize the medicinal value of the plant such as:

Castilleja lineariaefolia - Roots are valued highly as an emetic and the Indians will expend a great deal of effort to get these.

Enceliopsis nudicaulis - Roots are valued highly for treating bloody dysentery. The Indians will travel long distances to obtain a sample. The genus includes two species and neither have been tested.

* The percentage of activity (37%) is higher than one might expect, especially since 90% of the inactive species have never been evaluated in the PS tumor. Examples of unselected medicinal plants include uses for treating cuts, wounds, rheumatism, colds, unspecified swellings, venereal diseases, malaria, chicken pox & measles. One might also include the latter four diseases.

Cercocarpus ledifolius - The stem bark is used to treat sores, ulcers and diarrhoea. After the Indians collect a bark sample, they will let it sit for up to two years or more before they use it.

Lomatium dissectum var. multifidum - Probably one of the most frequently used medicinal plants by the Nevada Indians. The roots are often combined with samples from other species for treating numerous kinds of ailments.

Not all of the 44 species listed in the attached table are available in southern California, western Arizona and southwestern Nevada. Possibly 15 of these may be collected (as general samples).

Besides Train, Henrichs & Archer's Medicinal Uses of Plants by Indian Tribes of Nevada, I also reviewed Hartwell's Plants Used Against Cancer. If the genus was already listed in the attached table, I then indicated it was recorded by Hartwell. Other available genera and species not recorded from Train et al. but from Hartwell are:*

Arenaria (Caryophyllaceae) plant parts not specified
Buddleia (Loganiaceae) roots, leaves
Hymenocallis (Liliaceae) bulbs
Mirabilis (Nyctaginaceae) roots, leaves
Salvia (Lamniaceae) usually the leaves
Sedum (Crassulaceae) especially the leaves
Verbesina encelioides (Asteraceae) leaves

Medicinal plant samples from the desert areas of Western U.S. often seem to consist of roots. From looking at the attached table, it would appear that samples we tested most frequently from the desert consisted of the above ground parts. Perhaps we have not dug deep enough. Finally, there is the realization that even the 35% of the samples once tested were under outdated extraction procedures and obsolete tumor systems.

* These may be listed in Train but were not in the list of the 76 selected species.

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cc: Robert E. Perdue, Jr.

SELECTED MEDICINAL PLANTS USED BY THE INDIAN TRIBES OF NEVADA

PLANT NAME (FAMILY)	PLANT PART	TESTED			MEDICINAL USES**
		Species	Plant	Part*	
<u>Angelica breweri</u> (Apiaceae)	rt (fall)	+	-		sores
<u>Aquilegia formosa</u> (Ranuncul.)	rt	+	+		dysentery, emetic
<u>Artemisia spinescens</u> (Aster.)	st	-	-		hemorrhages
<u>A. tridentata</u>	lf	+	-		sores; also in Hartwell
<u>Balsamorhiza hirsuta</u> (Aster.)	rt	-	-		severe stomach & bladder troubles.
<u>B. sagittata</u>	rt	+	+		syphilitic sores, swellings
<u>Berberis repens</u> (Berber.)	rt	+	-		bloody dysentery
<u>Castilleja linariaefolia</u> (Scroph)	rt	+	-		emetic
<u>Cercocarpus ledifolius</u> (Rosac.)	sb	+	-		sores, ulcers, diarrhoea
<u>Clematis ligusticifolia</u> (Ranuc.)	lf	+	-		sores
<u>Dalea fremontii</u> (Fabaceae)	rt	+	-		hemorrhages
<u>D. polyadenia</u>	tw-lf	-	-		diarrhoea
<u>Enceliopsis nudicaulis</u> (Aster,)	rt	-	-		bloody diarrhoea
<u>Erigeron caespitosus</u>	rt	+	-		dysentery
<u>E. aphanactis</u> (Aster.)	pl	+	+		emetic
<u>Eriodictyon angustifolium</u> (Hydrophyllaceae)	lf or tw-lf	+	+		antiemetic
<u>Eriogonum sphaerocephalum</u>	rt	-	-		diarrhoea
<u>Eryngium alismaefolium</u> (Apiaceae)	pl	-	-		diarrhoea
<u>Grindelia squarrosa</u> (Aster.)	pl	+	+		emetic, also in Hartwell
<u>Heuchera rubescens</u> (Saxifrag.)	rt	-	-		diarrhoea, liver; other species in Hartwell
<u>Holodiscus dumosus</u> (Rosac.)	rt	+	+		diarrhoea, internal swelling
<u>Haplopappus nanus</u> (Aster,)	pl	-	-		dysentery
<u>Hypericum formosum</u> var. <u>scouleri</u> (Hyperic.)	pl	+	+		sores

PLANT NAME (FAMILY)	PLANT PART	TESTED		MEDICINAL USES**
		Species	Plant Part*	
<u>Iris missouriensis</u> (Iridaceae)	sd	+	-	poisonous, sores
<u>Krameria grayii</u> (Krameriaceae)	rt	+	+(fresh)	sores
<u>Larrea tridentata</u> (Zygophyll.)	lf	+	+	bowel cramps; also in Hartw.
<u>Leucocrinum montanum</u> (Amaryll.)	rt	-	-	sores
<u>Lomatium dissectum</u> var. <u>multifidum</u> (Apiaceae)	rt	+	+	for many ailments often combined with other species
<u>Lygodesmia spinosa</u> (Aster.)	wooly hairs	+	-	boils, running sores, swellings, antiemetic, diarrhoea
" "	rt	-	-	
<u>Osmorhiza occidentalis</u> (Apiac.)	rt	+	+	diarrhoea, sores
<u>Pedicularis attolens</u> (Scroph.)	pl	-	-	sores
<u>Phlox longifolia</u> (Polemon.)	rt	-	-	diarrhoea
<u>Pluchea sericea</u> (Aster.)	rt	+	+(fresh)	bloody diarrhoea
<u>Prunus andersonii</u> (Rosac.)	tw-1f	+	+	diarrhoea
<u>Psathyrotes ramosissima</u> (Aster.)	pl	+	+	emetic, diarrhoea, liver
<u>Purshia tridentata</u> (Rosac.)***	lf	+	-	emetic, sores, internal ruptures
" "	sb	-	-	
<u>Ribes aureum</u> (Saxifrag.)	sb	+	-	sores
<u>Rosa woodsii</u> (Rosac.)	rt	+	-	bloody diarrhoea
<u>Rumex venosus</u> (Polygon.)	rt	+	-	persistent or running sores inflamed gall bladder, diarrhoea; other species listed in Hartwell
<u>Sarcobatus vermiculatus</u> (Chenopod.)	pl	+	+	diarrhoea, rectal bleeding
<u>Sphaeralcea ambigua</u> , <u>S. munroa</u> or <u>S. parvifolia</u> (Malvac.)	rt	+	-	emetic, swellings, bloody diarrhoea; also in Hartwell (lf-fr)
<u>Tetradymia comosa</u> var. <u>tetrameres</u> (Aster.)	rt	-	-	bloody diarrhoea
<u>Zygadenus paniculatus</u> (Liliac.)	bu	-	-	swellings, poisonous
<u>Z. venosus</u>	bu	+	+	swellings, poisonous

SPECIES

Listed 44
Tested 31 (70.5%)

SAMPLES

Listed 46
Tested 16 (34.8%)

- *+ + Species and the plant part indicated have been tested
- + - A sample of the species has been tested but not the plant part indicated
- - No samples of the species have been tested
- ** Not all medicinal uses of these plants mentioned in Train are indicated; only those I felt were significant
- *** This species is recorded as active but under the "DN" category. The combination of uses suggest that we might try this one again.