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The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Foot of Lake LeBarge, J. B. Tarleton, 1899 (No. 344).

Hamalobus tinellus (Pursh) Britton,

Astragalus tinellus Pursh, Fl. 2: 413, 1814

Astragalus multiflorus Gray, Prodr. Am. Acad. 6: 226, 1864

Hamalobus tinellus Britton in Britton & Brown Ill. Fl. 2: 305, 1899

branched,

appressed pubescent, 2 to 5 dm. high; leaves 3 to 6 cm. long, leaflets 4 to 8 pairs, 8 to 17 mm. long, oblong or ~~oblong~~^{oblong} linear, rarely obovate, obtuse or retuse, glabrous above, hairy beneath; peduncles slender, not exceeding the leaves; raceme lax; calyx about 3 mm. long, the teeth 1 mm. or less long, ~~acute~~ subulate; keel of the corolla purplish tipped; stipe of the pod not equaling the calyx. On dry soil in the upper Yukon valley southward to California, Colorado and Nebraska. Originally described from the "Banks of the Missouri."

Upper Yukon valley. — Red Mountain, M. & W. Gorman, 1899 (No. 1115). Fifty ~~th~~ miles above Stewart River, ~~1899~~ J. B. Tarleton, 1899 (No. 165a).

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Astragalus L.

A genus of about 1000 species and of very wide distribution in both hemispheres.

Key to the species.

Pod completely 2-celled.

A. agrestis.

Pod 1-celled, the dorsal suture sometimes intruded,
Dorsal suture not intruded.

Calyx-teeth about 1 mm. long, ovate, obtuse;
flowers 12 to 15 mm. long.

A. amblyodon.

Calyx-teeth about 2 mm. long, subulate, acute;
flowers about 10 mm. long.

A. debilis.

Dorsal suture more or less intruded.

Pod stipitate.

Pod deeply grooved.

A. alpinus.

Pod not grooved.

Leaflets obtuse or retuse, glabrous above,
hairy below.

A. funestoni.

Leaflets acute, ~~pubes~~ hairy on both
surfaces.

A.

Pod sessile.

Flowers purple, 6 to 8 mm. long; leaflets usually hairy beneath.

A. elegans.

Flowers yellow or ochroleucous, 10 to 15 mm. long; leaflets usually glabrous on both surfaces.

Dorsal suture completely dividing the pod about one half its length above the base.

A. williamsii.

Dorsal suture intruded one third the breadth of the pod or less, not completely dividing it at the base.

Leaflets narrowly oblong, linear or lanceolate, commonly entire.

A. garmani.

Leaflets oval, oblong oval or oblong, commonly emarginate.

A.

Astragalus agrestis Dougl.

Astragalus agrestis Dougl.; G. Don, Gen. Syst. 2: 258, 1832.

Astragalus tarletonii Rydb. in Britton & Rydb. Bull. N.Y. Bot.

Gard. 2: 175, 1901.

Ascending, 15-3 dm. high, commonly much branched; stems glabrous or sparingly hairy; stipules lanceolate, obtuse or acute, slightly hairy, free from the petiole but somewhat cohering round the stem; leaflets 6 to 15 mm. long, oblong to linear, usually emarginate, sparingly strigose; flowers ^{ascending} in a short-compact raceme; tube of the calyx from one half to as long as the tube; corolla purple, 15 to 18 mm. long; pod sessile, ascending, densely hairy with white hairs.

Upper Yukon Valley and reported as A. hypoglottis L.,
from the Chitkat Region, Bartlett Bay and Point Barrow.
It ranges southeastward to Hudson Bay, Minnesota
and Kansas thence westward to Nevada, Oregon
and Washington. It was first described from
"near the Columbia river in fields."

Upper Yukon, - Five Finger Rapids, J. B. Tarleton, 1899
(No. 79), Fifty Mile River, A. L. Bolton June 25, 1899.

A. tarletonis described by Dr. Rydberg from ^{the} speci-
men collected at Five Finger Rapids and separated
from the A. hypoglottis of most American authors
on the basis of its larger calyx teeth does not
appear to be ^{differentiable} ~~different~~ from other specimens of this
species. Material from the northern United States
shows the calyx-teeth to be variable in length, some
specimens having teeth as long as in the type of
A. tarletonis, but varying ^{and} ~~in~~ different specimens from
one half to as long as the tube, some specimens
from the upper Yukon also have shorter calyx-teeth.
The American plant differs however from ~~the~~
A. hypoglottis L. originally described from Spain,
as pointed out by Jones.

Jones, Proc. Cal. Acad. II, 5: 646, 1895.

Astragalus amblyodon Kearney sp. nov.

"Plant appressed-pubescent with short, both white and black hairs, caudex slender, creeping, much branched, the branches terminating in flower-bearing shoots which are leafy only near the base; leaves 3 cm. or less in length from the base of the petiole; stipules thin, becoming scarious and nearly white, very broadly ovate, obtuse, connate nearly to the apex, ciliate; leaflets 9 to 13 (mostly 13), 5 mm. or less long, elliptical, conspicuously emarginate, of firm texture, the midvein only obvious; racemes 3 to 5-flowered on peduncles 2 or 3 times as long as themselves, pubescence towards summit of peduncle mainly black; flowers comparatively large and showy, about 15 mm. long; calyx about 5 mm. long, densely villous with short black hairs, its teeth very short, less than 1 mm. long, rounded; petals violet towards ^{the} summit, elsewhere white; ovary sessile, oblong-lanceolate in outline, perfectly unilocular, neither suture either intruding or impressed; mature pods not seen." Kearney Mss.

in the United States National Herbarium

Type specimen, collected July 5 to 19, 1899 at Stipavak Bay, Alaska Peninsula, by Charles Palache.

It is apparently most closely related to *A. debilis* but differs from that plant in ~~being much smaller~~ its smaller size, its ~~larger flowers~~ connate stipules, larger flowers, and in its shorter obtuse calyx teeth.

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Alaska Peninsula. - Stipsovich Bay, Charles Palache,
July 25th 1899. Kukak Bay, Kirkland July 2, 1899.

Astragalus debilis (Mutt.) Gray.

Phaca debilis Mutt. in Torr. & Gray, Fl. 11 340, 1838.

Astragalus debilis Gray, Proc. Acad. Phil. 15, 60, 1863.

Rather weak and slender stemmed, ascending or decumbent; stems 2, 3 to 4 dm. long, inconspicuously hairy with short scattered hairs; stipules lanceolate, acute or acuminate, more or less membranous; leaflets 3-11 mm. long, oblong or elliptical rarely linear, obtuse or somewhat truncate and emarginate, appressed hairy beneath, glabrous above; peduncles slender; raceme short or long and elongated, rather few flowered; flowers violet; ovary black-hairy.

Upper Yukon Valley. Originally described from "Plains of the Rocky Mts. near streams."

Upper Yukon. - Ft. Selkirk, J. B. Tarterton, 1899 (No. 128a) Ranch Valley, M. W. Garman, 1899 (No. 1082).

6,

Astragalus alpinus L.

Astragalus alpinus L. Sp. Pl. 2: 760, 1753.

Phaca astragalina DC. Astrag. 5-2, 1802.

More or less decumbent; stems 6 to 30 cm. long, glabrous or sparingly hairy; stipules ovate, foliaceous, acute, or the lower ones obtuse; leaflets glabrous or hairy, usually hairy on the lower surface, 3 to 6 mm. long, oval, elliptical or oblong, obtuse or emarginate; peduncles mostly exceeding the leaves, the upper part black hairy; caecum short and compact; flowers reflexed at anthesis; calyx about 5 mm. long, the teeth about 2 mm. long, subulate; corolla white; pod 10 to 13 mm. long, densely black-hairy, pendant.

Sandy or gravelly banks of streams and beaches throughout Alaska, and southward to British Columbia and in the Rocky Mountains to Colorado, eastward to northern New England, Newfoundland and Labrador. Also in northern and central Europe where it was originally described, and in Asia.

8.

Astragalus funstoni Wight sp. nov.

Perennial, erect or nearly so; stems several from a woody base, about 4 dm. high, terete or more or less angled, finely striate, glabrous or very nearly so; stipules neither cohering nor adnate, glabrous or with a few scattered hairs, the lower ovate, obtuse, the upper broadly lanceolate and acute; leaves 5 to 7 cm. long, petioles rather slender, leaflets 4 to 6 pairs, 15 to 20 mm. long, 3 to 8 mm. broad, paler on the lower surface, oblong-oval to oblong, the terminal one sometimes shallowly obtuse or retuse, glabrous on the upper surface, hairy on the lower, the pubescence thin; peduncles axillary, commonly somewhat exceeding the leaves, the raceme rather short; upper part of peduncle, bracts and calyx pubescent with rather short, black hairs; bracts straw-colored, slightly exceeding the pedicels, lanceolate; flowers about 10 mm. long; calyx about 5 mm., the teeth 1.5 mm., acute; corolla ochroleucous except the purple tipped keel, standard emarginate, wings entire; ovary stipitate, densely black-hairy, the dorsal suture intruded about $\frac{1}{3}$ the breadth; mature pod not seen.

Type, ^{specimen} in the United States National Herbarium collected June 9, 1893, near Post on Forty Mile Creek, Alaska, by Frederick Funston (No. 67).

A. funstoni apparently belongs to the *Arbores* group but without any close relative.

Yukon Valley. — Near Post on Forty Mile Creek, Frederick Funston, 1893 (No. 67).

9.

Astragalus

Appressed pubescent with white hairs, about 3 dm. high; stipules free from the petiole and not united round the stem or the lower ones slightly united; leaves 6 to 8 cm. long, leaflets ~~about 5 pairs~~ 5 to 8 pairs, oblong to nearly lanceolate, acute at both the apex and base, 15 to 20 mm. long, 3 to 6 mm. wide, pubescent on both surfaces but more strongly so and paler on the lower; peduncles rather stout, ^{apparently few flowered,} pubescent of black and white hairs; bracts shorter than the calyx, narrowly lanceolate, acute; fruiting pedicels about 3 mm. long, black-hairy; calyx black-hairy, 5 to 6 mm. long, the teeth ^{1.5 to 2 mm. long,} 1.5 to 2 mm., subulate; pod ovoid-oblong, stipitate, the stipe about equaling the tube of the calyx, glabrous at maturity, one celled but the dorsal suture slightly indented. Flowers not-rem.

Type specimen in the United States National Herbarium, collected August 6, 1901 at

by F. C. Schrader.

Like the preceding A. _____
the Arabaides group.

^{apparently}
belongs to

Astragalus elegans (Hook.) Sheldon.

Placa elegans Hook. Fl. Bor. Am. 1: 144, 1830.

Astragalus oroboides americanus Gray, Proc. Am. Acad.
6: 205, 1864.

Astragalus elegans Sheldon, Bull. Geol. & Nat. Hist. Surv.
Winn. 7: 154, 1894.

Erect or nearly so, 2.5 to 5 dm. high;
stems inconspicuously appressed hairy with
fine short hairs, rarely glabrous; stipules
ovate, acute; leaflets 16 to 20 mm. long, oblong
or linear oblong, obtuse or retuse, glabrous above;
racemes elongated in fruit; bracts inconspicuous;
flowers commonly reflexed at anthesis;
calyx 4 to 5 mm. long, pubescent with short hairs,
the tube about 1 mm. long, inconspicuous; ~~stamens~~
pod 5 to 10 mm. long, ellipsoid, ~~usually~~ black or
grayish pubescent, reflexed.

Upper Yukon Valley southeastward to Labrador
and Quebec and southward to the higher Rocky
Mountains in the northern United States. Origin-
ally described from "Prairies in the Rocky Mountains".

Upper Yukon - Mill Flat, M. W. Garman, 1899
(No. 1050).

Astragalus williamsii Rydb.

Astragalus williamsii Rydb. in Britton & Rydb. Bull. N. Y.
Bot. Gard. 2: 175, 1901.

Stems ascending or erect, 2 to 4 dm. high,
glabrous or nearly so; stipules ovate to lanceolate, ~~see~~;
leaflets 4 to 6 pairs, elliptical to nearly linear,
commonly oblong-linear, 1.5 to 4 mm. long.

3 to 9 mm. wide, obtuse or retuse; flowers yellow; calyx about 3 mm. long, black-hairy; pod 8 to 12 mm. long, erect.

Upper Yukon Valley, originally described from near Big Salmon.

Upper Yukon - Fifty Mile River, A. L. Boller
Aug. 3. 1899. Near Big Salmon, R. S. Williams
Aug. 22. 1899.

Astragalus gormanii Wight sp. nov.

Perennial, 1.5 to 5.5 dm. high, erect or decumbent, stems glabrous or inconspicuously hairy with short appressed hairs; stipules free from the petiole, only the lower ones ^{slightly} ~~suberect~~ cohering round the stem, ovate or lanceolate, acute; leaves 4 to 8 cm. long, leaflets usually 5 or 6 pairs, glabrous on both surfaces, 12 to 22 mm. long, 2 to 8 mm. broad, oblong-linear to lanceolate, rarely oblong, obtuse and usually entire, ~~pale~~ lower surface paler than the upper; peduncles 1 to 2 dm. long, usually exceeding the leaves; racemes at length elongated, bracts ^{about 12 mm. long} membranous, narrowly lanceolate, acute; flowers ochroleucous except the purple tipped keel, at length becoming reflexed; calyx about 6 mm. long, thinly pubescent with short black and appressed hairs, the teeth 1 to 1.5 mm. long, acute; standard and wings emarginate; ovary glabrous, the dorsal suture slightly indented. Mature pod not seen.

Type specimen in the United States
National Herbarium, collected July 8, 1899 in
the upper Yukon valley at Fort Selkirk, by M. W.
Garman No. 1092.

Apparently most closely related to A. williamsii
but differing from that species in its usually
entire leaflets, and in the dorsal suture not
entirely dividing the pad at any point.

Upper Yukon. - Fort Selkirk, M. W. Garman,
1899 (No. 1092). Fifty Mile River, A. L. Bolton, June
25, 1899.

Fort Hamlin to the Kayahuk. - Takimbatna
River, a tributary of the Kayahuk, F. C. Schrader *

~~Schrader's plant~~ The plant collected by Schrader
differs from those collected in the upper Yukon, appar-
ently only in some of the leaflets being emarginate.

June 28, 1901.

Astragalus

Perennial, about 3.5 dm. high, apparently
decumbent, glabrous or very nearly so; stipules
lanceolate, acute; leaves 4.5 to 8 cm. long,
leaflets 3 to 6 pairs, 15 to 26 mm. long, 6 to 12 mm.
wide, oval, oblong-oval or oblong, commonly
emarginate at the apex, glabrous or the youngest
slightly hairy; peduncles black-hairy above, bracts
~~membranous straw-colored~~
~~about 4 mm. long~~ lanceolate, acute, glabrous.

about 12 mm. long, ochroleucous except the purple
tipped keel; calyx 5 to 6 mm. long, the teeth 1 to 2 mm.
long, acute, pedicels and calyx hairy with short
black and appressed hairs; ovary glabrous,
the dorsal suture slightly intruded; mature
pod not seen.

Type specimen in the United States Nation-
al Herbarium, collected July 2, 1899 at Five Finger
Rapids, Yukon Territory, by J. B. Tarleton
No. 926.

Apparently most closely related to *R. gor-
mani* but differs from that plant in the shape
~~of the leaflets, in their~~ its more decumbent
habit and, in the shape of the leaflets which
are also ^{much} broader and usually emarginate
its ~~are~~ much broader usually emarginate
leaflets.

Upper Yukon Valley. - At Five Finger Rapids,
J. B. Tarleton, 1899 (No. 926).

Bragallus Nees.

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Key to the Species.

Leaves digitately trifoliate or unifoliate

A. martinianus

Leaves pinnate.

Flowers few, 1 to 6, racemose or in an umbel-like cluster.

Calyx-teeth ^{about one fourth} $\frac{1}{4}$ the length of the tube; flowers 10 to 15 mm. long solitary or in twos; pod ~~acute-oblong~~ ^{inflated}.

A. inflatus.

~~nodes far apart~~
~~inflated~~
~~As det. says~~
~~they are distinct~~

Calyx-teeth ^{one third to one half} $\frac{1}{3}$ to $\frac{1}{2}$ the length of the tube; flowers 15 to 20 mm. long, 1 to 5 in a cluster, pod oblong, not inflated.

Bracts usually exceeding the pedicels; calyx-teeth $\frac{1}{3}$ the length of the tube; pod abruptly contracted at the beak, about 12 mm. long.

A. seawardii ^{var. *ensis*}

Bracts rarely exceeding the pedicels; calyx-teeth $\frac{1}{2}$ the length of the tube; pod attenuate at the beak, 20 to 30 mm. long.

Leaflets oblong-lanceolate or ovate-lanceolate, acute.

A. nigrescens.

Leaflets oval or obovate, obtuse or broadly acute.

A. pygmaeus.

Flowers axillal in a dense spike or
loose and elongated raceme.

Herbage with viscid glands, conspicuous under a lens.

~~Plants more or less viscid.~~

Leaflets ciliate on the margins other-
wise glabrous. A. leucanthus.

Leaflets more or less hairy on
both surfaces. A. ~~viscidus~~.

~~viscidus will probably
have to come in here.~~

Herbage without viscid glands, ^{flowers usually ochroleucous}
~~Plants not viscid.~~ A. viscidus.

A. viscidulus

~~Leaflet~~

Flowers 5-6 mm. long, ~~and~~ reflexed
after anthesis. A. deflexus.

Flowers 12 to 18 mm. long, not becoming
reflexed.

Leaflets in pairs, not verticillate,
^{campestriae} A. ~~campestriae~~.

Rydb. refers
one of these to
Ang. vanilii Nelson
but I am as yet in doubt
about it

Leaflets more or less verticillate.
Flowers yellow.

A. varians.

Flowers pink to scarlet ^{when fresh} fading
to dark blue in dried specimens,
said to be A. ~~glaberrimus~~.

Uragallus murtensianus (Tacz.) Greene.

Cerytropsis martiniana Lurcz. Bull. Soc. Nat. Mosc.
13¹¹: 68. 1840.

Aragallus martinianus Greene, Pitt. 3: 211. 1897.

Leaflets oblong to oblong-lanceolate, acute, glabrous on the upper surface, hairy below; ^{1.5 to 1.8 mm long, 2 to 4} flowers in an umbel-like cluster ~~= 1.5 to 1.8 mm~~; bracts about equaling the tube of the calyx; the teeth of the latter more than half as long as the tube; corolla purple or blue; pod oblong ~~ovate~~ with a short stipe.

Collected in Alaska near Port Clarence
and reported from Cape Lisburne^{*} and Cape Nome⁺ It has also

*Gray, Proc. Am. Acad. 20: 4, 1884. ~~not~~
xx Captwood, Bot. Gaz. 33: 206, 1902.

him collected on Kayne Island and was originally described from material collected at Pt. Lawrence Bay, Siberia.

Seward Peninsula —

- Port Clarence, about four miles northwest of
Teller Reindeer Station, F. A. Walpole, 1901 (No. 1869)

Aragallus inflatus (Hook.)^{a.} Nelson.

Cxytropis arctica inflata Hook. Fl. Bor. Am. ⁱⁿ 1: 146, 1834.

Exytropis podocarpa Gray, Proc. Am. Acad. 6: 234, 1864.

Agallus inflatus A. Nelson, Erythraea 759. 1899.

Densely tufted and villous; leaflets oblong to linear-lanceolate, obtuse or obtusish. Southern Yukon and south in the Rocky Mountains to Colorado, and reported also from Labrador. It was originally described from the "highest summits of the Rocky Mountains."

Upper Yukon,
Crater Peak,
vicinity of Summit and Middle Lakes, Yukon
Territory, A. L. Bolton, (1895.)

Lake Bennett near the summit of the "Pinnacle",
Yukon Territory, J. B. Tarleton, 1899 (No. 10).

Aragallus aowardii ^{various} Wright sp. nov.

Caespitose, silvery canescent perennial from 5 to 15 cm. high; leaflets frequently showing a tendency to become verticillate, oval, oblong or lanceolate, 3 to 10 mm. long, obtuse or acute; peduncles stoutish, usually slightly exceeding the leaves, 2 to 4-flowered; ^{pubescence of} the upper portion of the peduncle, the bracts and calyx ~~pubescent~~ of spreading white hairs intermixed with shorter black ones; bracts lanceolate, usually exceeding the pedicels; calyx 10 to 12 mm. long, the teeth about $\frac{1}{2}$ the length of the tube; flowers 15 to 20 mm. long, purplish blue, the standard abovate, emarginate; pod oblong, about 12 mm. long, rather abruptly contracted to a short beak, hairy.

Type specimen collected July 22, 1901 on gravelly flats near hills north of Teller Reindeer Station, Port Clarence, Alaska, by Dr. M. F. A. Walpole (No. 1522.)

A. sewardianus, ^{apparently} most closely related to A. nigrescens but differs from that plant in its more robust habit, in the leaflets showing a tendency to become verticillate, in its shorter calyx-teeth, its whiter pubescence and in its shorter, more abruptly contracted pod. Howe?

Seward Peninsula.

Port Clarence on gravelly flats near hills north of Teller Reindeer Station. F. A. Walpole, 1901 (Nos. 1522, 1558).

Aragallus nigrescens (Pall.) Keller.

Astragalus nigrescens Pall. Astrag. 507. t. 53. 1800.

Axytropis nigrescens Fisch.; DC. Prodr. 2: 278. 1825.

Aragallus nigrescens Keller, Cat. N. Am. Plants 4. 1898.

A tufted plant with rather slender leaf petioles and peduncles, growing in dry, especially rocky soil with a sparse plant covering, near sea-level in northern Alaska and in the Alpine regions farther south. It ranges from Sitka northward ~~to the westward~~ to the Aleutian Islands and along the coast to Cape Thompson. It occurs on the islands of Bering Sea and in eastern Siberia ~~where it was~~ from which place it was originally described.

Sitka, Dall 1874.

Eagle Bay, Kadiak Island, Coville & Kearney (No. 1463).

Kodiak, W.H. Evans, 1897 (No. 318).

Kukak Bay, Alaska Peninsula, Camille & Kearney (No. 1532).

Stepanovsk Bay, Alaska Peninsula, Palasche July 25-1899.

Herenduen Bay, Alaska Peninsula, C.H. Townsend July 1899.

Papof Island, Shumagin Islands, Kirkaid July 25-1899.

Nagai Island, Shumagin Islands, Harrington 1871-72.

St. Mathew Island, Bering Sea, Camille & Kearney (No. 2142).

Hall Island, Bering Sea, Camille & Kearney (No. 2014);

J. M. Macoun Aug. 11, 1891.

Lywood Peninsula,

Homer, about 5 miles north of Nome City, J.B. Flett, 1900 (No. 1582).

Port Clarence, Camille & Kearney (No. 1886).

Aragallus pygmaeus (Pall.) Wight.

Astragalus pygmaeus Pall. Astrag. 66, 54, 1800.

Oxytropis nigrescens pygmaea Cham. Linnaea 6: 546, 1831.

A more densely tufted or matted plant than the preceding, with usually smaller leaflets and shorter peduncles. It occurs in the coast region of Alaska from Nome to Port Clarence, on Kayne Island and in arctic and eastern Siberia. The material from which the original description was drawn came from the two last named ~~regions~~ ^{regions in} Siberia.

This plant, recognized as a variety of *A. nigrescens* by ~~Chamisso~~ ^{Chamisso} and Ledebour[†], has appar-

* Cham, Linnaea 6: 546, 1831.

† Ledeb. Fl. Ross. 1: 172, 1822.

entirely been referred by American ~~to~~ authors
 to A. nigrescens, ^{It has however a} ~~but its~~ more closely matted
 habit and smaller oval or obovate usually obtuse
 leaflets ^{characters which are constant in all the material at hand} ~~and which~~ ^{these} ~~would~~ seem to entitle it to specific rank.
 Its range is considerably more restricted than
 that of A. nigrescens. Found both
Alaska and
Siberia

Port Clarence, Conille & Kearney (No. 1910).

Hills north of Teller Rinder Station near Port
 Clarence, F. A. Walpole, 1901 (Nos. 1861, 1863, 1448). ^{in part}

Aragallus leucanthus (Pall.) Greene.

Astragalus leucanthus Pall. Astrag. 59, 547, 1800.

Oxytropis leucantha Pers. Syn. 2: 331, 1807.

Aragallus leucanthus Greene, Pitt. 3: 211, 1897.

About 8 cm. high, the peduncles usually ^{erect, compact,}
 equaling or but slightly exceeding the leaves;
^{stipules ciliate;} leaflets 7 to 12 pairs, oblong to obovate lanceolate,
 their margins usually conspicuously ⁱⁿ ~~revolute~~ ^{revolute},
^{granular on the lower surface.} calyx ~~with~~ ^{as in} ~~Cape Thompson~~ Port Clarence to
 Cape Thompson in Alaska and throughout
 eastern Siberia in Asia. It was originally
 described from eastern Siberia.

Cape Riley, near Port Clarence, J. L. White
 July 5, 1894.

Aragallus viscidus (Mutt.) Greene,
Oxytropis viscida Mutt. in *Trans. & Geog. Cl.* 1: 341. 1838,
Aragallus viscidus Greene, *Pitt.* 2: 211. 1897,

A rather stout plant 13 to 35 cm. high; peduncles
 squalling or considerably exceeding the leaves;
 raceme frequently somewhat elongated; stipules
~~stoutly~~ ^{on the back} hairy; leaflets ^{more or less} 5 to 20 pairs, oblong to lan-
 ceolate, the margins ~~less conspicuously~~ ⁱⁿ revolute
~~as in the preceding~~, ^{glandular on the lower surface, rarely on the upper} collected at White Horse
 Rapids, Yukon Territory, ~~and ranging~~ southward
 to the Black Hills of South Dakota, to Colorado
 and ~~and~~ westward to eastern Oregon. It
 was originally described from the "Rocky Moun-
 tains near the sources of the Oregon".

White Horse Rapids, Yukon Territory, J. B.
 Farleton, 1899 (No. 32a).

Aragallus deflexus (Pall.) Heller.

Astragalus deflexus Pall. Act. Petrop.

Aragallus deflexus Heller, Cat. N. Am. Plants 4, 1898.

Leaflets numerous, 10 to 20 pairs, ovate-lanceolate, the lower obtuse, the upper acute; calyx-teeth about equalling the tube. Five Finger Rapids, Yukon Valley, thence southward along the Rocky Mountains to southern Colorado, and in Siberia from Lake Baikal eastward. Originally described from

Five Finger Rapids, Yukon ^{Territory} Valley, M. W. G. & B. Farleton, 1899 (Nos. 60, 61).

Ranch Creek, Yukon Valley, M. W. Gorman, 1899 (No. 1060).

Aragallus campestris (L.) Greene

Astragalus campestris L. Sp. Pl. 2: 461. 1753.

Aragallus campestris Greene, Pitt. 3: 211. 1897

To this species are referred ~~several specimens~~ ^{miscellaneous} collection which though differing considerably from European *A. campestris* ^{are not} ~~do not seem to be~~ referable to any other Alaskan species, ~~and~~ though several sheets are at hand the specimens ^{are} ~~are~~ so variable that ^{since there are} in the absence of authentic Siberian material, ~~there being~~ forms which

indubitably occur on both sides of Bering Straits, it does not seem advisable to describe any of them as new. Moreover the present state of the campestris group is so confused as to render a revision of the already described forms desirable before any new names are added to the list.

Of the specimens cited below ~~the~~ ^{of these} are collected by Mr. F. C. Schrader, John River 1901, is noteworthy for the ~~rather~~ thin, delicate foliage and for the few-flowered, lax raceme. ^{Of the others cited} the first five are more robust and the pubescence is also more dense than ~~on the~~ is the case with the remainder.

Echeatnu River, Lieut. J. S. Herron Aug. 15, 1899

Kalibut Cove, Cook Inlet, Camille & Kearney (No. 2418).

Saldavia, Cook Inlet, Kirkaid July, 1899.

Kuchemak Bay Cook Inlet, Dr. T. H. Bean July 2, 1880.

Stipavak Bay, Alaska Peninsula, Palache July 85, 1899.

John River, F. C. Schrader June 25, 1901.

Point Gustavus, Glacier Bay, Camille & Kearney (No. 743).

Juneau, above Sitka Bow Basin, Grace Cooky Aug. 6, 1871.

Muir Inlet, Glacier Bay, Camille & Kearney (No. 647).

Nine, five miles north of Nome City, J. B. Felt, 1900 (No. 1558)

Guano de Large & Kayahuk Rivers, F.C. Schneider 1884.

Kabuck River, Mc. Lennan 1884.

~~John River, F.C. Schneider June 28, 1884.~~

Cape Aspinburg James T. White July 28, 1884.

Yukon Territory from above Fort Selkirk southward to Colorado, 11.

The variety richardsonii based by Hooker on a sparser pubescence and shorter bracts subtending the flowers, ~~was~~ raised to specific rank by Prof. Greene ~~who~~ described the bracts of A. splendens as exceeding the flowers, while those of A. richardsonii are said to be shorter than the calyx; the flowers of the latter are also described as being much smaller and the raceme narrower than in A. splendens. An examination of the material in the National Herbarium shows the length of the bracts to be variable, rarely exceeding the flower but frequently exceeding the calyx, while in others it is about the length of the calyx or only as long as the calyx-tube of ^{some} shorter. Some plants in a single spike exhibit bracts shorter than the calyx-tube, others somewhat exceeding the calyx, the lower ones usually being the shorter. The size of the flowers seems to be variable also and A. richardsonii is therefore given as a synonym of A. splendens.

Above Fort Selkirk, Yukon Territory, J. B. Carleton,
1899 (No. 33c).

Steamboat Blough, Yukon Valley, M. W. Gorman,
1899 (No. 1057).

Phaca L.

Perennial herbs ^{similar to} ~~resembling~~ Astragalus, ^{in habit} a large genus, mainly of north temperate regions.

Key to the Species.

Plant erect, 30 to 50 ^{cm.} dm. high; the calyx-teeth inconspicuous.

P. americana.

Plant weak or decumbent, 10 to 20 ^{cm.} dm. high; calyx-teeth obvious.

Leaflets entire, ^{or rarely slightly cuneate} 10 to 20 mm. long, podacate at the ends, 2 cm. or less long, stipitate.

P. littoralis.

Leaflets emarginate, about 10 mm. long; pod rounded at the ends, about $\frac{1}{4}$ cm. long, sessile.

P. polaris.

Phaca americana (Hook.) Rydb.

Phaca puidida americana Hook, Fl. Bor. Am., 1: 140, 1830.

Phaca americana Rydb. in Britton & Brown, Ill. Fl., 2: 304, 1897.

Nearly glabrous, ^{raceme several flowered;} flowers ^{white} 10 to 15 mm. long; calyx glabrous at nearly 20 except the margin of the tube; pod glabrous. Moist woods and river banks in the upper Yukon valley and in the wooded regions

of the Rocky Mountains in lat. 52° to 56° to Slave Lake in lat. 61° where it was originally described, thence southward to Quebec ~~and~~ southward to British Columbia and in the ^{Rocky} Mountains to Colorado.

Upper Yukon. - Above Fort Selkirk, J. B. Tarleton, 1899 (No. 17a). Fort Selkirk, J. B. Tarleton, 1899 (No. 117c), M. W. Garman, 1899 (No. 1091).

Phaca littoralis (Hook.) Rydb.

Phaca frigida littoralis Hook. L. B. Torr. Ann. 1: 142, 1830.

Phaca littoralis Rydb. in Britton & ^{Rydb.} ~~Harmon~~ Bull. N. Y. Bot. Gard. 2: 176, 1901.

Stems pubescent. Leaflets glabrous above, strongly pubescent beneath; ^{calyx plus flowered involucres,} ~~flowers~~ ^{yellow} ~~about~~ ^{about} 1.5 mm. long; calyx black-hairy; pod pubescent with short brownish or black hairs. On the tundra near sea-level ranging from Point Barrow and St. Matthew Island to the ^{Alaska Peninsula,} Shumagin Islands and the mainland in the Chilkoot Isthmus region. It extends also along the Arctic coast from Point Barrow eastward to the Mackenzie River. It was originally described from material collected between the ^{last} ~~latter~~ locality and Cape Lisburne.

Arctic Alaska, - Point Barrow, E. Murdock 1883.

Siward Peninsula - Teller Reindeer Station, F. A. Walpole, 1901 (No. 1535).

Between Bristol Bay and Norton Sound. - Cape Vancouver, J. M. Macoun Aug. 9, 1891.

St. Mathew Island. - Corville & Kearney (No. 2133).

Alaskan Peninsula. - Stefavak Bay, Charles Palache
July 8-19, 1899.

Alutian chain. - Shumagin Islands, M. W. Harrington
1891-92. Popof Island one of the Shumagin Islands,
Kinikaid July 8-19, 1899.

Phaca polaris (Benth.) Wight.

Astragalus polaris Benth. in Hawk. Trans. Linn. Soc. 23!
323, 1861.

Stem slightly pubescent above with short
black hairs; stipules slightly connate at the base
of the stem stipules ovate; leaflets glabrous above,
slightly appressed hairy beneath especially near
the midrib, with short black hairs; peduncles
not exceeding the leaves, 1 to 4 flowered, bracts short,
scarcely exceeding the pedicels; calyx ^{black-hairy} about 5
mm. long, black the teeth triangular ~~acute~~ or lanceo-
late, acute, 2 to 3 mm. long; ovary densely black
hairy, the mature pod incurved & densely so.

Originally described from ~~Coastal~~ Eschscholtz Bay
and since collected at Cape Vancouver.

Between Bristol Bay and Norton Sound. - Cape
Vancouver, J. M. Macdonn Aug. 9, 1891.

Vicia L.

~~Climber~~ Herbaceous vines either climbing or trailing; leaves ^{with} ~~leaving~~ branched tendrils; calyx ^{stubby} somewhat oblique; pod flat. About 120 species of very wide distribution.

V. sitchensis Bang.
Vicia gigantea Hook.

Vicia sitchensis Bang. *Mém. Acad. Petersb. II. Math. & Nat.*

2: 129, 1831.

Vicia gigantea Hook. *Fl. Bor. Am.* 1: 157, 1834.

^{perennial}
A rather stout, branched, ascending or ~~at~~ reclining; stems sometimes 2 m. long, leafy; leaflets numerous, ^{stipules half sagitate, lower lobes} to 4 cm. long, oblong, obtuse, mucronulate; ~~leaves~~ ^{purplish,} flowers ^{peduncled,} rather one-sided racemes; pod short stipitate. Thickets and borders of woods from the Chilkoot region southward to San Francisco in California. ~~the~~ Type locality, Baranof Island.

Alexander Archipelago. - Sitka, W. H. Evans, 1898 (No. 772), Coville & Kearney (No. 848). Japanese Island, B. W. Evermann, 1892 (No. 250), Wrangell, W. H. Evans, 1897 (No. 45), Hawkan, W. H. Evans, 1897 (No. 107).

^{Many land,}
South eastern Alaska. - Helm Bay, Cleveland Peninsula, J. B. Flitt, 1901 (No. 1986), Foggy Bay, near Cape Fox, ~~Baranof Island~~ (No. 107).

Lathyrus L.

Herbaceous vines, usually decumbent or reclining; tendrils simple or branched; pod flat or terete. About 110 species, occurring in the northern hemisphere and in South America.

Key to the Species.

Stem winged; leaflets linear, lanceolate or oblong.

L. palustris.

Stem wingless; leaflets ^{elliptical}, oval or obovate, rarely oblong.

L. maritimus.

Lathyrus palustris L.

Lathyrus palustris L. Sp. Pl. 2: 733. 1753.

Perennial,

Glabrous or minutely pubescent; stipules usually lanceolate, half sagittate, acute; leaflets 2 to 4 pairs, ~~glabrous~~ pubescent or glabrous beneath, rarely pubescent above, acute or obtusish and mucronate; tendrils usually branched; flowers 12 to 18 mm. long. Grassy places and borders of woods and thickets from Cleveland Peninsula in South eastern Alaska to Unalaska, ~~and~~ ^{and} ~~Mushagak~~ and Rampart. It has also been collected at Rampart on the Yukon River and reported from Buckland River, toward Pelly. It ranges south eastward to Labrador and New York, ~~and~~ ^{and} ~~Southward to~~ ^{Southward to} South Dakota and British Columbia.

It was originally described from Europe and occurs also in Asia.

Southeastern Alaska. - Helm Bay, Cleveland Peninsula, J. B. Flitt, 1901 (No. 1985).

Juraneau to Kurai Peninsula. - Kantak Island, Yakutat Bay, Frederick Fursten, 1892 (No. 74).

Cook Inlet. - Kasilof W. H. Evans, 1898 (No. 681).

Kodiak Island. - ^{Kodiak} ~~without special locality~~ Canille & Kearney (No. 2360), ~~Karluk~~

J. H. Bean 1889, J. K. Fisher 1899, Kellogg 1867, W. H. Evans 1897 (No. 433).

Alutian chain. - Popof Island, Shumagin Islands, Kinkaid July 8 to 19, 1899, Unga Island, F. A. Gilder, 1900 (No. 73), Unalaska, C. H. Merriam 1891.

Unshagak. - C. L. McKay 1881.

Yukon Valley. - Rampart, C. C. Georgeson, 1900 (No. 35).

Lathyrus maritimus (L.) Bziel.

Pisum maritimum L. Sp. Pl. 2: 727, 1753.

Lathyrus maritimus Bziel, Fl. Boet. ed. 3. 286, 1840

Lathyrus maritimus aluticus Greene; White, Bull. Torr. Bot. Club 21: 450, 1894.

Perennial; stems glabrous or nearly so; stipules ovate, half-hastate, acute or rarely obtuse; leaflets 3 to 4 pairs, ^{usually} obtuse, ~~uninervate~~ ^{uninervate} glabrous above,

glaberrima

pubescent below beneath; tendrils usually simple; flowers racemes rather few-flowered; flowers 15 to 25 mm. long. Sandy sea beaches and dunes. One of the most abundant and characteristic of Alaskan strand plants, ranging from the southern boundary to ^{the Aleutian and British Islands} Kotzebue sound, and reported to extend as far as Point Barrow on the Arctic coast. It extends southward on the Pacific coast to California, ^{and occurs in the Great Lake region}, and on the Atlantic coast from ^{the} the Arctic coasts southward to New Jersey. It was originally described from Europe and occurs also in Asia.

The variety aleutica ^(described as having leaflets "round or elliptical not ovate as in the type" to the authors) is here reduced, as the form of the leaflets varies from elliptical to ovate in the same specimen and a like variation occurs in European material.

Southeastern Alaska. - Hawken, W. H. Evans, 1897 (No. 125). Spacious Bay, M. W. Gorman, 1895 (No. 78½). Dyer, Wm. M. Canby, 1897 (No. 48).

Inner to Kurai Peninsula. - Dyer, Wm. M. Canby, 1897 (No. 43). Yakutat Bay, Frederick Funston, 1892 (No. 20). Canby & Kearney (No. 1129).

Cook Inlet. - Hammer, W. H. Evans, 1897 (No. 505). Kaslof, W. H. Evans, 1898 (No. 596).

Alaska Peninsula - Kukak Bay, Caville & Kearney
(No. 165), Nelson's Lagoon, F. A. Golder, 1900 (Nos. 61, 62).

Kodiak Island. - Without special locality, W. D. Evans,
1897 (No. 366), Caville & Kearney (No. 2318)

Alutian chain. - Unalaska, C. H. Townsend June 28,
1893, B. W. Evermann, 1892 (Nos. 62, 32), J. B. Lott, 1900 (No. 195).
Adak Island, B. W. Evermann, 1892 (No. 167), Adak Island,
C. H. Townsend July 1, 1893.

Nushagak. - C. L. McKee June 21, 1881.

Pribilof Islands. - St Paul Island, C. H. Townsend Aug. 1893,
Tule & Prentiss, 1895 (Nos. 15, 100), Wm. Palmer, 1890 (No. 497),
C. H. Merriam July 30, 1897, J. M. Macoun Aug. 1897.

Seward Peninsula. - An gravelly spit at Chukik,
A. J. Collins, July 3, 1900. Sixteen miles west of Nome
city, J. B. Lott, 1900 (No. 1578), Cape Riley, J. F. White July 5,
1894, Vicinity of Port Clarence, F. A. Walpole, 1901 (Nos. 161,
1690) Cape Cernyburg, J. F. White July 25, 1894, Hathorn
Inlet, S. M. Hickey July 5, 1885.

1.
Lupinus L.

Pubescent herbs with showy flowers in terminal racemes; calyx ^{thus} 2-lipped, the lips more or less toothed. A genus of about 100 species occurring in ^{the} temperate and subtropical regions of both hemispheres with a few species in the arctic regions.

Key to the species.

Petioles long, those of the lower leaves at least twice as long as the leaflets. L. septentrionalis.

Petioles rather short, ^{they are} usually little longer than the leaflets except the very small leaves ^{near the base} ~~of the stem where the stipules are adnate to the petiole~~ ^{with stipules} for an unusual length. L. nootkatensis

Lupinus septentrionalis Piper
~~arcticus~~ Wats?

Lupinus septentrionalis Piper

Perennial, 1.5 to 3 dm. high, woody at the base, pubescent; stipules adnate to the base of the petiole, the free portion 5 to 10 mm. long, lanceolate, acute or acuminate; leaves usually 18-foliolate, leaflets ob-lanceolate, acute, 2 to 6.5 cm. long, glabrous on the upper surface, hairy below; upper lip of the calyx two-toothed, the teeth 1.5 to 3 mm. long, lower lip 6 to 8 mm. long, usually three-toothed; flowers said to be purple, pink or even white; pod 2 to 4 cm. long, pubescent with rather short hairs. ~~Often monoecious and dioecious~~

Lupinus nootkatensis Donn.

Lupinus nootkatensis Donn; Sims, Bot. Mag. F. 1811. 1812.

Perennial, 2 to 6.5 dm. high, usually erect and ~~woody~~ villous with spreading pubescence; stems often stout and strongly striate; free portion of the stipules 10 to 25 mm. long, lanceolate to linear-lanceolate, acute or acuminate; leaves 6 to 8 foli-olate, the leaflets oblanceolate to cuneate-oblong, usually rounded at the apex, mucronulate, ~~rarely~~ ~~scarcely~~ usually pubescent on both surfaces, rarely glabrous above; raceme 8 to 20 cm. long; upper lip of calyx two-toothed, the lower three-toothed; mature pods 3.5 to 4 cm. long. Beaches and dunes or grassy slopes mostly near sea-level, but sometimes in alpine meadows and ranging from the southern boundary of Alaska to the extremest of the Aleutian chain and to the Pribilof Islands. It extends southward in British Columbia to Vancouver Island where it was originally obtained.

Southern Yukon Territory. - Little Meadows, head of Bear River, above Middle Lake, A. L. Bolton 1878.

Alexander Archipelago. - Farquhar Bay on the northern shore of Frederick Sound, Canille & Kearney (No. 457).

Yukon to Kenai Peninsula. - Point Gustavus, Glacier Bay, Canille & Kearney (No. 716). Hidden Glacier, Russell Fjord, Canille & Kearney (No. 990). Egg Island, Disenchantment Bay, Canille & Kearney (No. 1052). Yakutat Bay, Canille & Kearney (No. 1052).

found at about 2000 ft. alt. Caville & Kearney (No. 1193).

Cook Inlet. - Kasilof, W.H. Evans, 1878 (No. 618).

Alutian Islands. - Unalaska, B.W. Everman, 1892 (No. 11), Caville & Kearney (No. 1708).

Pribilof Islands. - St. Paul Island,
Tanner & Painter, July 1873 (No. 38101).
C.H. Townsend Aug. 1873

Lupinus orokhatensis unalaskensis Wats.

Lupinus orokhatensis unalaskensis Wats. Proc. Am. Acad.
8: 524. 1873.

Differs from the species in (usually) being smaller and frequently somewhat decumbent in the procor-
its usually ~~is usually~~ shorter and appressed, pubes under
ence being ~~also apparent~~ the ~~app~~ and appressed, in
the upper surface of the leaflets frequently being glabrous,
in the shorter raceme and in ^{its base deeply toothed} the upper calyx-lip being
less deeply toothed, the lower one merely coarsely
truncate. It has the habitat of the species and there
are however, forms which are intermediate and
difficult of determination. It has the habitat of the
species and ranges from ^{Muchagak and Unalaska} Cook Inlet to
Yakutat Bay, ~~Unalaska and Muchagak~~. It was originally de-
scribed from material collected at Unalaska
and Port Mulgrave in Yakutat Bay.

Cook Inlet. - Tanner, W.H. Evans, 1877 (No. 304).

Alaska Peninsula. - Kukak Bay, Caville & Kearney
(No. 1634), Kirkaid July 2, 1879.

Kodiak. — W. H. Evans, 1877 (No. 315), Cassille & Kearney (No. 1431)

~~to~~ Alutian Islands. — Unga Island ^{one of the Shumagin Islands}. F. L. Golder, 1920 (Nos. 58, 92). ~~Dutch Harbor~~ Unalaska, C. H. Loomis June 29, 1873. Dutch Harbor, Unalaska, Lane & Purpus, 1875 (No. 119).

1,

Hedysarum L.

Perennials ~~herbs~~ with showy flowers in axillary ^{long peduncled} racemes, ^{flowers with} the standard and wings shorter than the keel. About 60 species occurring in the north temperate regions of both hemispheres and in ~~the~~ northern Africa.

Key to the Species.

Calyx-teeth triangular-acute, shorter than the tube.

H. americanum

Calyx-teeth subulate, ~~acute~~ acuminate, equalling or exceeding the tube.

H. mackenzii

Hedysarum americanum (Michx.) Britton,

Hedysarum alpinum americanum Michx., Fl. 2: 74, 1893.

~~*Hedysarum boreale* Nutt., Gen. 2: 110, 1818.~~

Hedysarum americanum Britton, Mem. Torr. Bot. Club 5: 201, 1894.

Stems ^{inconspicuously} minutely appressed hairs or glabrous, ~~to 5 dm. high~~; leaflets oblong, lanceolate or ovate-lanceolate, rarely obovate on the lower leaves, ^{or acute} obtuse, ~~and~~ mucronulate, ^{or acute} glabrous above, hairy beneath; racemes at length elongated; flowers ~~purple~~, 2 to 18 mm. long; calyx teeth more densely pilose than the tube.

Occurs ~~usually growing~~ in sandy river banks and in rocky places and ~~ranges~~ from Cape Lisburne and Seward Peninsula where it reaches the coast, throughout the interior reaching the coast again at Cook Inlet and ~~at~~ in southeastern Alaska. It ranges southward to British Columbia and in the Rocky Mountains to Utah and the Black Hills, and southward to Newfoundland and ^{northern} New England. Originally described from "borealis Canadæ et in cataractis montium Alleghaniis".

Seward Peninsula. - Five miles north of Nome City, J. B. Flitt, 1900 (No. 1579). White Mountain, about 5 miles north of Golovin Sound, A. J. Collins, July 5, 1900. Vicinity of Port Clarence, F. A. Walford ~~the~~ 1901 (Nos. 1696, 1821).

Fort Hamlin to the Kayukuk. - Old Man Creek, a branch of the Kayukuk, W.C. Mendenhall July 6, 1901, Valley of Alabma River, W.C. Mendenhall, July 21, 1901, Rampart, Isaac Jones, 1901 (No. 41).

Between Cook Inlet and the Tanana. - Glenn, 1899, Tateno branch of Echeatnu River, a tributary of the Kusko-kwin, J. S. Hedron July, 1899.

Cook Inlet. - Sunrise City, W.H. Evans, 1897 (No. 490)

Upper Yukon Valley. - Coal Creek Hill, Frederick Furston, 1893 (No. 49). Fifty Mile River, A.L. Patton July 29, 1899. Ft. Selkirk, W.H. Osgood July 25, 1899. Ranch Creek, M.W. Garman, 1899 (No. 1018). Five Finger Rapids, J.B. Tarleton, 1899 (No. 62 b.).

Hedysarum maskungii Richards.
Hedysarum maskungii Richards. App. Frank. Journ.
 745, 1823.

Stems

Minutely pubescent, ~~2-5 dm. high~~; leaflets oblong, elliptical or lanceolate, minutely appressed pubescent or canescent on the lower surface, glabrous or canescent above; racemes commonly shorter than in the preceding; flowers about 20 mm. long; calyx-teeth ciliate, somewhat pubescent on the back.

From Kobuk River and Port Clarence southeastward throughout the interior of Alaska, thence it ranges to Hudson Bay and southward to Colorado originally described from "Barren Grounds from Point Lake to the Arctic Sea".

Arctic Alaska - Koluk River, Hovey 1886.

Seward Peninsula - On tundra, Sellar River Station, F. A. Walpole, 1901 (No. 10551).

Fort Hamilton to the Kayukuk - Guns de Lange and Kayukuk Rivers, F. C. Schrader 1899.

Between Cook Inlet and the Tanana - Tanana River, C. C. Georgeson, 1900 (No. 16). Chekatna River, a tributary of the Kuskokwim, J. S. Herron July 31, 1899.

Upper Yukon Valley - Fort Yukon, F. C. Schrader June 21, 1899. Coal Creek Hill, Frederick Luntson, 1893 (No. 78). Ft. Selkirk, M. W. Garman, 1899 (No. 1034). Five Finger Rapids, J. B. Tarleton, 1899 (No. 79).

Papilionaceae L.

Key to the Genera.

Leaves digitate.

Leaves 5 to 11 foliolate; stamens monadelphous.
Lupinus.

Leaves 3 foliolate; stamens diadelphous.

Trifolium.

Leaves pinnate (except in Aragallus murtensianus).

Leaves evenly pinnate, undril bearing.

Style with a tuft of hairs at the summit.
Vicia.

Style bearded along the inner side.

Lathyrus.

Leaves odd-pinnate, without undrils.

Pod jointed.

Hedysarum.

Pod not jointed.

Acaulescent or nearly so, the keel of the corolla mucronate or appendaged at the apex.

Aragallus.

Cauliscent, keel of the corolla not mucronate or appendaged at the apex.

Pod flat, completely 1-celled, the sutures slightly prominent externally.

Hamalobus.

Pod succulent and 1-celled, or when flat one or both sutures intruded.

Pod not much succulent, leathery or papery, 1-celled or one or both sutures intruded.

Astragalus.

Pod much inflated, membranous, neither suture intruded.

Phaca.

Trifolium L.

Herbs with flowers in dense heads. About 2500 species occurring in both hemispheres, mainly in temperate and subtropical regions.

Key to the Species.

Heads sessile or nearly so among the upper leaves;
flowers sessile, usually red. *T. pratense*.

Heads long peduncled; flowers pedicelled, white
or pinkish. *T. repens*.

Trifolium pratense L. Red Clover.

Trifolium pratense L. Sp. Pl. 2:768, 1753,

About wharves and at waysides, occurring in a few of the towns in southeastern Alaska, probably a recent importation as none of the older authors mention it. Originally described from Europe.

Southeastern Alaska. - Juneau, Conille and Kearney =
(No. 2499).

Trifolium repens L. White Clover.

Trifolium repens L. Sp. Pl. 2:767, 1753,

Naturalized about dwellings, ^{and along way sides & in various} ~~on southeastern~~
^{places from Juneau to Kodiak.} ~~Alaska.~~ Originally described from Europe.

Southeastern Alaska. - Sitka, Conille & Kearney (No. 859),
Eliasson, 1897 (No. 242),

Kodiak Island. - About dwellings, Conille & Kearney,
(No. 242).