

**Supplementary material**

Supplementary material Appendix 1 Table A1. Overview of chromosome counts of taxa sometimes included in *Poa* sections *Oreinos* and *Abbreviatae* as historically conceived.

Species	Infrasp.	2n=	Original determination	Literature Reference	No. of independent counts	Voucher	Country Region	Herbarium vouchered
<i>P. abbreviata</i>	subsp. <i>abbreviata</i>	2n= 42		Bowden unpublished	1	<i>Bowden-1544-S5 (Bruggemann 541!)</i>	Canada, Prince Patrick Isl.	DAO!
<i>P. abbreviata</i>	subsp. <i>abbreviata</i>	2n= 42	as <i>P. abbreviata</i>	Hedberg 1967	1	<i>Hedberg 3256!</i>	Canada, Cornwallis Isl.	DAO, UPS
<i>P. abbreviata</i>	subsp. <i>abbreviata</i>	2n= 42	as <i>P. abbreviata</i>	Holmen 1952	1	<i>Holmen</i>	Greenland, Parry land	
<i>P. abbreviata</i>	subsp. <i>abbreviata</i>	2n= 42	as <i>P. abbreviata</i>	Jørgensen et al. 1958	2	<i>JSW &amp; JWS fig. 23</i>	Greenland	
<i>P. abbreviata</i>	subsp. <i>abbreviata</i>	2n= 42	as <i>P. abbreviata</i>	Mosquin & Hayley 1966	1	<i>Mosquin &amp; Martin-06464!</i>	Canada, Melville Isl.	DAO!
<i>P. abbreviata</i>	subsp. <i>pattersonii</i>	2n= 42		Löve, Löve & Kapoor 1971	1	<i>Defler &amp; Snyder-L-13464</i>	USA, Colorado	
<i>P. abbreviata</i>	subsp. <i>pattersonii</i>	2n= 42		Soreng 1991	1	<i>Soreng-2548</i>	USA, Colorado	US!
<i>P. abbreviata</i>	subsp. <i>pattersonii</i>	2n= 42		Soreng 1991	1	<i>Soreng-2555</i>	USA, Colorado	US!
<i>P. abbreviata</i>	subsp. <i>pattersonii</i>	2n= 42		Soreng 1991	1	<i>Soreng-1165-2</i>	USA, Montana	US!
<i>P. abbreviata</i>	subsp. <i>pattersonii</i>	2n= 42	as <i>P. abbreviata jordalii</i>	Zhukova & Petrovsky 1972	1		RUSSIA Wrangel Isl.	
<i>P. abbreviata</i>		2n= 28		Sokolovskaya & Strelkova 1960	1		RUSSIA	
<i>P. abbreviata</i>		2n= 42		Petrovsky & Zhukova 1981	1		RUSSIA Wrangel Isl.	

<i>P. abbreviata</i>		2n= 42		Zhukova 1968	1		RUSSIA Wrangel Isl.	
<i>P. abbreviata</i>		2n= 42		Zhukova 1968	1		RUSSIA Wrangel Isl.	
<i>P. banffiana</i>		2n= 84	as <i>P. laxa</i> <i>banffiana</i>	Soreng 1991, full voucher Soreng 2005	1	<i>Soreng-1137</i>	USA, Montana	US!
<i>P. dolosa</i>		2n= 14	as <i>P.</i> <i>pirinica</i>	Stoeva 1977	1		EUROPE Bulgaria	
<i>P. dolosa</i>		2n= 14	as <i>P.</i> <i>pirinica</i>	Strid & Franzén 1981	1		EUROPE Greece	
<i>P. flexuosa</i>	subsp. <i>fernaldiana</i>	2n= 42	as <i>P.</i> <i>fernaldiana</i>	Löve 1954, Löve & Löve 1964b, Löve & Löve 1966	1	<i>Löve &amp; Löve-7539</i>	USA, New Hampshire	
<i>P. flexuosa</i>	subsp. <i>fernaldiana</i>	2n= 42	as <i>P.</i> <i>fernaldiana</i>	Nygren 1955 [1956]	1	<i>O. Rune in 1951 (seed sent to Nygren)</i>	Canada, Quebec, Gaspé Pen.	UPS
<i>P. flexuosa</i>	subsp. <i>fernaldiana</i>	2n= 42	as <i>P.</i> <i>fernaldiana</i>	Bowden 1961	1	<i>Bowden-1821(c1)! (Erskine sn)</i>	USA, New York	DAO!
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as <i>P.</i> <i>flexuosa</i>	Clapham, Tutin & Warburg 1952	1	<i>verified in Nygren 1955</i>	EUROPE Scotland	
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as <i>P.</i> <i>flexuosa</i>	Nygren 1950	1	<i>Nygren-4704</i>	EUROPE Norway	UPS
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as <i>P.</i> <i>flexuosa</i>	Nygren 1950	1	<i>Nygren-4727</i>	EUROPE Norway	UPS
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as <i>P.</i> <i>flexuosa</i>	Nygren 1950	1	<i>Nygren-4774</i>	EUROPE Norway	UPS
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as <i>P.</i> <i>flexuosa</i>	Nygren 1950	1	<i>Nygren-4779</i>	EUROPE Norway	UPS

<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as P. flexuosa	Nygren 1950	1	<i>Nygren-4782</i>	EUROPE Norway	UPS
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as P. flexuosa	Nygren 1950	1	<i>Nygren-4700 (H.Smith)</i>	EUROPE Sweden	UPS
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as P. flexuosa	Nygren 1950	1	<i>Nannfeldt 1935: 94 {as cited by Nygren, counted from a Nannf. Prep. }</i>	EUROPE Sweden, Jamptland	UPS
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as P. flexuosa	Löve & Löve 1956	1	<i>A. Löve</i>	EUROPE Iceland	
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 42	as P. flexuosa	Skalińska, Banach- Pogan & Wcisło 1957	1		EUROPE	
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 43	as P. flexuosa	Nygren 1950	1	<i>Nygren-4710 (H.Smith)</i>	EUROPE Sweden	UPS
<i>P. flexuosa</i>	subsp. <i>flexuosa</i>	2n= 81	as P. flexuosa	Nygren 1950	1	<i>Nannfeldt 1935: 48 {as cited by Nygren, Nannf. Listed his collections in 1935 s.n.}</i>	EUROPE Norway, Opland	UPS
<b><i>P. flexuosa</i></b>	subsp. <b><i>consauliae</i></b>	2n= <b>42</b>		<b>new</b>	<b>1</b>	<b><i>Gillespie et al.-6775-3</i></b>	<b>Canada, Baffin Isl.</b>	<b>CAN!</b>
<b><i>P. flexuosa</i></b>	subsp. <b><i>consauliae</i></b>	2n= <b>42</b>		<b>new</b>	<b>1</b>	<b><i>Gillespie et al.-6731-2</i></b>	<b>Canada, Baffin Isl, Savage Isls.</b>	<b>CAN!</b>
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 21	as P. <i>laxa</i>	Nygren 1955 [1956]	10	<i>Nygren</i>	EUROPE Switzerland, St. Gotthard	UPS
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as P. <i>laxa</i>	Duckert- Henroid & Favarger 1987	11	<i>DH: -626, -641, -644, -733, -804, -826, -846</i>	EUROPE Switzerland and Italy	

<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Hadač & Hašková 1956	1	<i>Hadač in 1949</i>	EUROPE Czech Republic, Tatra Mts.	
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Májovský et al. 1976	1	<i>Foltínová</i>	EUROPE Czech Republic, Tatra Mts.	SLO
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Májovský & Uhríková 1985	1	<i>Paclová</i>	EUROPE Czech Republic, Tatra Mts.	SLO
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Nygren 1955 [1956]	11	<i>Nygren</i>	EUROPE Switzerland, Bernina Mts.	UPS
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Nygren 1955 [1956]	10	<i>Nygren</i>	EUROPE Switzerland, Grimsel Pass	UPS
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Nygren 1955 [1956]	3	<i>Nygren</i>	EUROPE Switzerland, Furka Pass	UPS
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Skalińska 1954	1		EUROPE Poland, Tatra Mts.	
<i>P. laxa</i>	subsp. <i>laxa</i>	2n= 28	as <i>P. laxa</i>	Skalińska, Banach- Pogan & Wcisło 1957, cited by Edmondson n dissertation	1		EUROPE Poland, Sudetic and Tatra Mts.	
<i>P. leptocoma</i>		2n= 42		Bowden 1961	1	<i>Bowden-1359!</i>	USA, Alaska, Kenai Peninsula	DAO!
<i>P. leptocoma</i>		2n= 42		Sokolovska ya & Probatova 1968	1	<i>-1922a</i>	RUSSIA far east	
<i>P. leptocoma</i>		2n= 42		Sokolovska ya & Probatova 1968	1	<i>-2145</i>	RUSSIA far east	

<i>P. leptocoma</i>	2n= 42		Sokolovska ya 1963	1		RUSSIA far east	
<i>P. leptocoma</i>	2n= 42		Soreng & Hatch 1983	1	<i>Soreng-1148-4</i>	USA, Montana	US!
<i>P. leptocoma</i>	2n= 42		Soreng 2005	1	<i>Soreng-1347-2</i>	USA, Utah	US!
<i>P. lettermanii</i>	2n= 14		Löve & Löve 1988	1	<i>Löve-</i>	USA Colorado	
<i>P. minor</i>	2n= 28		Duckert- Henroid & Favarger 1987	8		EUROPE Switzerland	
<i>P. minor</i>	2n= 28		Nygren 1955 [1956]	6	<i>Nygren</i>	EUROPE Italy, Grigna	UPS
<i>P. minor</i>	2n= 28		Nygren 1955 [1956]	12	<i>Nygren</i>	EUROPE Switzerland, Bernina Mts.	UPS
<i>P. minor</i>	2n= 28		Nygren 1955 [1956]	16	<i>Nygren</i>	EUROPE Switzerland, Samnauen	UPS
<i>P. paucispicula</i>	2n= 28		Zhukova 1965a	1		RUSSIA	
<i>P. paucispicula</i>	2n= 42		Yurtsev & Zhukova 1978	1		RUSSIA far east	
<i>P. paucispicula</i>	2n= 42		Sokolovska ya & Probatova 1973	1	<i>-3012</i>	RUSSIA far east	
<i>P. paucispicula</i>	2n= 42	as <i>P. leptocoma</i>	Soreng & Hatch 1983 (ID corrected in Soreng 2005)	1	<i>Soreng-1016</i>	Canada, Alberta	US!
<i>P. paucispicula</i>	2n= 42		Zhukova & Petrovsky	1		RUSSIA far east	

<i>P. paucispicula</i>	2n= 42		1971 Zhukova & Petrovsky 1987	1	<i>sh-77-260</i>	RUSSIA far east
<i>P. paucispicula</i>	2n= 42		Zhukova & Tichonova 1973	1		RUSSIA far east
<i>P. paucispicula</i>	2n= 42		Zhukova 1967	1		RUSSIA far east
<i>P. paucispicula</i>	2n= 42		Zhukova 1968	1		RUSSIA
<i>P. paucispicula</i>	2n= 42		Zhukova 1968	1		RUSSIA
<i>P. paucispicula</i>	2n= 42		Zhukova 1980	1	<i>-3012</i>	RUSSIA far east
<i>P. pseudoabbreviata</i>	2n= 14	as <i>P.</i> <i>brachyanthera</i>	Johnson & Packer 1968	5		USA, Alaska
<i>P. pseudoabbreviata</i>	2n= 14		Sokolovska ya & Probatova 1973	1		RUSSIA far east, Yakutskaya
<i>P. pseudoabbreviata</i>	2n= 14		Zhukova 1965b	1		RUSSIA far east
<i>P. pseudoabbreviata</i>	2n= 14		Zhukova 1967	1		RUSSIA far east
<i>P. pseudoabbreviata</i>	2n= 14		Zhukova 1965b	1		RUSSIA far east
<i>P. riphaea</i>	2n= 56		Hoták et al. 2013	2		EUROPE Czech Republic

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Table A2. Morphological differences among studied taxa of the *Poa laxa* complex and *P. glauca*.

Taxon	Color	Tillers	Culm height	Culm habit	Culm internodes & nodes	Basal sheath bases	Distal culm sheath openness	Ligules of upper culm leaves	Ligule vestiture	Ligule apices	Sterile shoots, timing	Blades size	Blade shape, firmness	Blade vestiture	Cauline blades graduation	Panicle size	Panicle attitude, shape, contraction	Panicle spikelet crowding, peduncles, proximal internode length	Branch x-section	Branch vestiture	Length of longest branches
<i>P. banffiana</i>	green or slightly grayish, violaceous in part	mainly extravaginal and pseudointravaginal, cataphylls present	8–30 cm, to 1.1 mm diam.	ascending to erect, slender to slightly stout	smooth, nodes 0(–1) exerted, uppermost in the lower 1/3 of culm, smooth	bases of basal sheaths glabrous	margins fused 1/5–1/3 the length	2–3.5 mm long	abaxially smooth	acute, edges smooth	sterile shoots like those of the culms, contemporary with flowering shoots	1–4(–6) cm long, 1.5–2(–3) mm wide	folded, <b>fairly firm</b>	smooth abaxially and adaxially, margins also smooth or sparsely scabrous distally	not strongly graduated or reduced distally	2–8 cm long, 1–3 cm wide	slightly lax, loosely contracted	sparse to moderately dense, proximal internode 1–2 cm long	sulcate or few-angled	angles very lightly or infrequently smooth,	1.2–3(–3.5) cm
<i>P. flexuosa subsp. consauliae</i>	green, violaceous in part	erect, mixed intra- and extravaginal, cataphylls present	6–25 cm, 0.6–0.9 mm diam.	ascending to erect, slender	nodes 0(–1) exerted, uppermost in the lower 1/3 of culm	bases of basal sheaths glabrous	margins fused 1/4–1/3 the length	<b>1.25–2.5 mm long</b>	abaxially smooth or lightly scabrous	obtuse to acute, usually irregularly dentate to lacerate, edges smooth	sterile shoots like those of the culms, contemporary with flowering shoots	1.6–3.8(–4.5) cm long	folded, usually thin, soft	smooth or lightly scabrous abaxially and adaxially, proximal margins sparsely to moderately scabrous	not strongly graduated or reduced distally	1.5–4.5(–5.5) cm long	slightly lax, ovoid, contracted to loosely contracted	moderately dense, proximal internode 1–2 cm long	sulcate or few-angled	smooth or angles lightly (to moderately) scabrous	0.8–2(–3) cm
<i>P. flexuosa subsp. fernaldiana</i>	green or usually grayish, weakly violaceous	erect, mainly pseudointravaginal, cataphylls present	8–35 cm, 0.5–0.9 mm diam.	ascending to erect, slender	nodes 0–1(–2) exerted, uppermost in lower 1/3 of culm	bases of basal sheaths glabrous	margins fused 1/4–1/3 the length	2.5–4(–8) mm long	abaxially smooth or lightly scabrous	obtuse to acute, usually irregularly dentate to lacerate, edges smooth	sterile shoots like those of the culms, contemporary with flowering shoots	3–8(–10) cm long, 1–2(–3) mm wide	folded, usually thin, soft	smooth or lightly scabrous abaxially and adaxially, proximal margins sparsely to moderately scabrous	not strongly graduated or reduced distally	2–8 cm long	lax, loosely contracted to open	sparse to moderately dense, proximal internode 1–2 cm long	sulcate or few-angled	smooth or angles very lightly (to moderately) scabrous	1–3(–4) cm
<i>P. flexuosa Sm. subsp. flexuosa</i>	green, violaceous in part	erect, mainly intravaginal with with-developed prophylls, cataphylls infrequent	10–25(–30) cm, 0.6–0.9 mm diam.	ascending to erect, slender	nodes 0(–1) exerted, uppermost in the lower 1/3 of culm	bases of basal sheaths glabrous	margins fused 1/5–1/3 the length	<b>1.25–2.5(–3.5) mm long</b>	abaxially smooth, or lightly scabrous	obtuse to acute, usually irregularly dentate to lacerate, edges smooth	sterile shoots like those of the culms, contemporary with flowering shoots	mostly 1–4 cm long, 1.5–2 mm wide	folded, usually thin, soft	smooth or lightly scabrous abaxially and adaxially, proximal margins sparsely to moderately scabrous	not strongly graduated or reduced distally	(2–)2.5–4(–8) cm long	slightly lax, contracted to loosely contracted	moderately dense, proximal internode 1–2 cm long	sulcate or few-angled	smooth or angles infrequently very lightly scabrous	0.8–2 cm
<i>P. laxa subsp. laxa</i>	green or slightly grayish, slightly violaceous in part	erect, mixes of intra-, extra-, and pseudointravaginal, cataphylls present	8–30(–35) cm, 0.5–0.9 mm diam.	ascending to erect, slender	smooth, nodes 0(–1) exerted, uppermost in the lower 1/3 of culm, lower sometimes scabrous or acute	bases of basal sheaths glabrous <b>or with minute retrorse hairs</b>	margins fused 1/5–1/3 the length	2–4(–5) mm long	abaxially smooth or lightly scabrous	obtuse to acute, often irregularly dentate to lacerate, edges smooth	sterile shoots like those of the culms, contemporary with flowering shoots	mostly 2.5–5 cm long, 1–2(–2.5) mm wide	flat or folded thin, soft	smooth or lightly scabrous abaxially, lightly to moderately and scabrous adaxially, proximal margins sparsely to closely scabrous	not strongly graduated or reduced distally	2–8 cm long, 1–3 cm wide	slightly lax, usually loosely contracted	sparse, or infrequently contracted and moderately dense, proximal internode 1–2 cm long	sulcate or few-angled	smooth or angles lightly scabrous	1–3(–4) cm
<i>P. wallowensis</i>	green, violaceous in part	erect, intra- and extravaginal, cataphylls present	8–14 cm, to 0.9 mm diam.	ascending to erect, slender	smooth, nodes 0 exerted	bases of basal sheaths glabrous,	margins fused 1/5–1/3 the length	<b>1.25–2 mm long</b>	abaxially smooth	obtuse	sterile shoots like those of the culms, contemporary with flowering shoots	1–3 cm long, 1.5–2 mm wide	folded, <b>fairly firm</b>	lightly scabrous abaxially,	not strongly graduated or reduced distally	3.5–6 cm long, 0.5–1 cm wide	fairly strict, contracted	sparse to moderately dense, proximal internode 1–1.5 cm long	sulcate or few-angled	smooth or angles lightly scabrous	0.8–1.5(–3) cm
<i>P. glauca subsp. glauca</i>	<b>grayish, glaucous, commonly violaceous in part</b>	erect, mostly extravaginal, cataphylls 1–3	<b>10–40(–80) cm, 0.6–1.5 mm diam.</b>	<b>ascending to erect, straight, wiry, bases straight or slightly decumbent</b>	<b>smooth or scabrous (commonly with at least a few hooks below the nodes, but rarely below panicles), nodes usually 0–1 exerted, uppermost usually in proximal 1/10–1/3 of the culm</b>	bases of basal sheaths glabrous <b>or with sparse minute retrorse hairs</b>	margins fused 1/10–1/5 the length	(1.2–)2.5–3.5(–5) mm long	<b>abaxially sparsely to densely scabrous</b>	<b>obtuse to acute, edges of lower ligules entire or weakly dentate, densely minutely ciliate</b>	<b>sterile shoots rare (next years flowering shoots set at end of growing season)</b>	0.8–2.5(–3) mm wide	flat or folded, thin, soft	commonly lightly scabrous abaxially, <b>lightly to moderately scabrous adaxially, margins scabrous</b>	<b>increasing in length distally</b>	<b>3.5–10(–20) cm long, 0.5–4(–8) cm wide</b>	<b>erect, fairly strict, narrowly lanceoloid to ovoid, contracted or somewhat open</b>	sparse, proximal internodes 0.8–2(–4) cm long	<b>usually 2–3 angled</b>	<b>angles moderately to densely scabrous occasionally nearly smooth for much of the length and angles distally glaucous</b>	0.6–2(–10+) cm

Table S2. Morphological differences among studied taxa of the *Poa laxa* complex and *P. glauca*.

Taxon	Spikelet length/width ratio	Spikelet shape comparison	Spikelet color	Rachilla internodes length, vestiture	Glume shape, thickness	Glume apices	Lower glume venation	Upper glume	Callus	Lemma length	Lemma shape	Lemma color	Lemma texture, scabrousness, pubescence	Lemma margins	Lemma apex	Palea vestiture	Anthers length, development	Caryopsis length	Chromosome no.
<i>P. banffiana</i>	2–2.7 x long as wide	ovate	violaceous, not pruinose	less than 1 mm long, smooth, glabrous	lanceolate to broadly lanceolate, thin	acute	(1–)3-veined	subequaling lowest lemma	<b>glabrous</b>	3–4.6 mm	lanceolate	usually violaceous distally	keel short villous in proximal 1/2+ and marginal veins to 1/2 the length, hairs slenderly-blunt or sharp-tipped, intermediate veins of at least one side of some florets very sparsely crisp puberulent (infrequently all intermediate veins glabrous), between veins smooth, glabrous	smooth to sparsely scaberulous along distal edges	acute or obtuse, with or without a faint bronze colored band	paleas sparsely to moderately scabrous along the keels (hooks in single files), between keels glabrous	0.8–1.1 mm long (well-formed)	ca. 1.8 mm long	2n=84
<i>P. flexuosa subsp. consauliae</i>	<b>1.5–2 x long as wide</b>	<b>broadly ovate</b>	usually violaceous, not (or slightly) pruinose	to 0.8 mm long, smooth, glabrous	<b>broadly lanceolate to ovate, thin</b>	acute (acuminate) or obtuse	0.75–1.05 mm wide, 3-veined	3.7–4.1 x long as wide, 3.7–4.7 mm long, 0.9–1.3 mm wide, subequaling (rarely surpassing) lowest lemma	all glabrous, or of some proximal florets within a spikelet sparsely webbed	3.7–4.5 mm	<b>broadly lanceolate</b>	usually strongly violaceous at maturity	keels short to long villous in proximal 1/3–1/2 and marginal veins to 1/3 the length, hairs mostly blunt-tipped, intermediate veins glabrous (infrequently sparsely crisp puberulent), between veins glabrous	scaberulous along edges	obtuse, usually with a faint bronze colored band	paleas sparsely to moderately scabrous along the keels (hooks in single files), between keels glabrous	<b>mostly 1.2–1.6 mm long, poorly formed, the sacs not fully maturing, not dehiscing, about 0.1 mm in diameter</b>	ca. 1.7 mm long	2n ca 42
<i>P. flexuosa subsp. fernaldiana</i>	2–2.6 x long as wide	ovate	usually violaceous, not pruinose	to 0.8 mm long, smooth (rarely aculeolate), glabrous	lanceolate, thin	sharply acute	3-veined	upper glume subequaling lowest lemma	of at least some proximal florets sparsely webbed (rarely all glabrous)	3.5–5 mm	lanceolate	green or grayish, violaceous distally	keels short villous for 1/2+ and marginal veins to 1/3 the length, hairs mostly blunt-tipped, intermediate veins glabrous, between veins glabrous	sparsely to moderately scaberulous along edges	acute, usually with a faint bronze colored band	paleas sparsely to moderately scabrous along the keels (hooks in single files), between keels glabrous	(0.6–)0.8–1.1 mm long (well-formed)	ca. 1.7 mm long	2n=42
<i>P. flexuosa Sm. subsp. flexuosa</i>	<b>1.5–2 x long as wide</b>	<b>broadly ovate</b>	usually violaceous, not (or slightly) pruinose	to 0.8 mm long, smooth (rarely sparsely aculeolate), glabrous	<b>lanceolate to ovate, thin</b>	acute or obtuse	0.6–0.8 mm wide, 1–(faintly 3)-veined	3.7–4.1 x long as wide, 3.7–4.7 mm long, 0.9–1.3 mm wide, subequaling to equaling (to slightly longer than) lowest lemma	webbed, hairs mostly less than 1/2 the lemma in length	(2.8–)3.2–4(–4.5) mm	<b>broadly lanceolate</b>	usually violaceous	keel short to long villous in proximal 1/3–2/5 and marginal veins to 1/5 the length, hairs mostly sharp-tipped, intermediate veins glabrous between veins smooth or sparsely to moderately scabrous distally, glabrous (or proximally infrequently very sparsely crisp puberulent)	smooth or usually moderately to densely scaberulous along edges	obtuse, usually with a faint bronze colored band	paleas sparsely to moderately scabrous along the keels (hooks in single files), between keels glabrous	0.8–1.1 mm long (well-formed)	ca. 1.7 mm long	2n=42
<i>P. laxa subsp. laxa</i>	2–2.5 x as long as wide	ovate	usually violaceous, not (or slightly) pruinose	less than 1 mm long, smooth (or sparsely aculeolate), glabrous	lanceolate (to broadly lanceolate), thin	sharply acute	3-veined	subequaling to equaling (rarely surpassing) lowest lemma	webbed, hairs few to several, usually more than 1/2 to as long as the lemma in length	3–4.2(–4.6) mm	lanceolate	usually violaceous distally	keels short to long villous in proximal (2/5–)1/2–3/5 and marginal veins to 2/5 the length, hairs mostly blunt-tipped, intermediate veins glabrous, between veins smooth or lightly scabrous, glabrous	smooth to sparsely scaberulous along distal edges	acute, usually with a faint bronze colored band	paleas sparsely to moderately scabrous along the keels (hooks in single files), between keels glabrous	0.8–1.1(–1.3) mm long (well-formed)	ca. 1.5–1.7 mm long	2n=(21), 28
<i>P. wallowensis</i>	2–2.4 x long as wide	ovate	violaceous or green only, not pruinose	less than 1 mm long, smooth, glabrous	lanceolate to broadly lanceolate, thin	sharply acute	1–3-veined	upper glume subequaling lowest lemma	webbed, hairs several and long, to 1/2 the lemma or more	2.8–3.5 mm	lanceolate	strongly violaceous distally	keels short villous in proximal 1/2+, marginal veins to 2/5 the length, hairs blunt-tipped, intermediate veins glabrous, between veins smooth, glabrous	scaberulous along distal edges	acute, usually with a faint bronze colored band	paleas sparsely to moderately scabrous along the keels (hooks in single files), between keels glabrous	0.6–1.0 mm long (well-formed)		2n=unknown
<i>P. glauca subsp. glauca</i>	2–2.5 x long as wide	ovate	<b>usually violaceous, glaucous</b>	<b>up to 1.2 mm long, usually muriculate, or scabrous if glabrous, or sparsely to densely hispidulous or softly puberulent</b>	narrowly to broadly lanceolate, thicker	<b>acute to sharply acute, or obtuse</b>	3-veined	2–3.8(–5.2) mm long, usually more than 4.1 x long as wide, distinctly shorter to subequaling lowest lemmas	webbed (arctic material rarely glabrous, but then lemmas pubescent between veins), web minute and of only a few hairs to well-developed to more than 1/2 the lemma	2.5–4 mm	lanceolate	<b>grayish, deeply violaceous in part</b>	<b>keel and marginal vein short to long villous, often softly puberulent on intermediate veins, hairs slender blunt or sharp-tipped, between veins lightly scabrous, glabrous or frequently short villous to softly puberulent</b>	sparsely to moderately scaberulous along distal edges	<b>obtuse or acute, usually with a distinct bronze colored band</b>	<b>paleas scabrous (hooks often in irregular files), glabrous or medially softly puberulent over the keels, between keels glabrous or softly puberulent</b>	<b>(1–)1.2–1.8(–2.5) mm long, mature sacs 0.2 mm wide, well-formed (infrequently aborted late in development and narrower, poorly-formed)</b>		<b>2n=42, 44, 50, 56, 64, 65, 70, 75, 78</b>