

**Table ES04.** List of samples used for the ddRAD analysis with information on voucher specimens in the Botanical Museum Berlin (B) and ploidy, collection localities, coordinates, and collectors.

Sample	Taxon	Ploidy	Voucher specimens	Locality	Coordinates (latitude, longitude)	Collectors
135-05	<i>L. ageratifolium</i> Pau	2x	B100386712	FR, Occitania, Pyrénées-Orientales, La Vallée Heureuse, 410 m	42.5038, 2.9603	Konowalik KK42 & Ogradowczyk
M60-01	<i>L. ageratifolium</i> Pau	2x	B100345012, B100345013	ES, Castile-La Mancha, Cuenca, Salinas de Manzano, 1157 m	40.1019, -1.521	Cordel 60
M60-011	<i>L. ageratifolium</i> Pau	2x	B100345012, B100345013	ES, Castile-La Mancha, Cuenca, Salinas de Manzano, 1157 m	40.1019, -1.521	Cordel 60
90-01	<i>L. burnatii</i> Briq. & Cavill.	2x	B100464678	FR, Provence-Alpes-Côte d'Azur, Alpes-Maritimes, Plateau de Calern, 1235 m	43.7607, 6.9165	Vogt 16615 <i>et al.</i>
92-02	<i>L. burnatii</i> Briq. & Cavill.	2x	B100464676, B100464675	FR, Provence-Alpes-Côte d'Azur, Bouches-du-Rhône, Col des Portes, 650 m	43.5450, 5.6626	Vogt 16618 <i>et al.</i>
L1008	<i>L. eliasii</i> (Sennen & Pau) Sennen & Pau	2x	B100484003	ES, Castile and León, Burgos, Rio Ubierna, 880 m	42.5030, -3.7060	López 2537 & <i>al.</i>
L1009	<i>L. eliasii</i> (Sennen & Pau) Sennen & Pau	2x	B100484004	ES, Castile and León, Burgos, San Martín de Ubierna, 920 m	42.5070, -3.7050	Galán Cela 576 & Martín
209-01	<i>L. gaudinii</i> Dalla Torre	2x	B100386664	CH, Bern, Interlaken-Oberhaslit, Kleine Scheidegg, 2260 m	46.5781, 7.9700	Tomasello TS88
270-01	<i>L. gaudinii</i> Dalla Torre	2x	B100413007	AT, Carinthia, Spittal an der Drau, Torscharte, 2200 m	47.0025, 13.5275	Oberprieler 10859
276-01	<i>L. gaudinii</i> Dalla Torre	2x	B100413015	AT, Carinthia, Feldkirchen, Falkert, 2270 m	46.8603, 13.8172	Oberprieler 10866
451-01	<i>L. gaudinii</i> Dalla Torre	2x	No voucher	PL, Lesser Poland, Giewont, 1860 m	49.2505, 19.9343	Konowalik 20160909-01
84-10	<i>L. gracilicaule</i> (Dufour) Pau	2x	B100386704	ES, Valencian Community, Alicante, Benirama, 296 m	38.8379, -0.1853	Konowalik KK20 & Ogradowczyk
85-04	<i>L. gracilicaule</i> (Dufour) Pau	2x	B100386702	ES, Valencian Community, Valencia, Altury, 337 m	39.3135, -0.6810	Konowalik KK25 & Ogradowczyk
116-01	<i>L. graminifolium</i> (L.) Lam.	2x	B100464684, B100464683	FR, Occitania, Hérault, Col du Perthus, 802 m	43.7761, 3.2386	Vogt 16693 & <i>al.</i>

Sample	Taxon	Ploidy	Voucher specimens	Locality	Coordinates (latitude, longitude)	Collectors
96-03	<i>L. graminifolium</i> (L.) Lam.	2x	B100464663	FR, Occitania, Aude, Roc de L' Aigle, 560-600 m	43.1494, 2.6294	Vogt 16656 & al.
162-03	<i>L. halleri</i> (Vitman) Ducommun	2x	B100386798	DE, Bavaria, Garmisch-Partenkirchen, Meilerhütte, 2345 m	47.4134, 11.1277	Konowalik KK67 & Tomasello
162-031	<i>L. halleri</i> (Vitman) Ducommun	2x	B100386798	DE, Bavaria, Garmisch-Partenkirchen, Meilerhütte, 2345 m	47.4134, 11.1277	Konowalik KK67 & Tomasello
208-01	<i>L. halleri</i> (Vitman) Ducommun	2x	B100386672	FR, Valais, Sion, Col du Sanetsch, 2320 m	46.3308, 7.2911	Tomasello TS65
280-01	<i>L. laciniatum</i> Huter & al.	2x	B100464203	IT, Calabria, Cosenza, Col del Dragone, 1580 m	39.9020, 16.1144	Tomasello 420
280-02	<i>L. laciniatum</i> Huter & al.	2x	B100464203	IT, Calabria, Cosenza, Col del Dragone, 1580 m	39.9020, 16.1144	Tomasello 420
366-01	<i>L. legraeae</i> (Rouy) B.Bock & J.-M.Tison	2x	B100486634, B100486635, B100486636, B100486637, B100486638	FR, Provence-Alpes-Cote d'Azur, Massif des Maures, 410 m	43.1986, 6.3151	Vogt 17189
369-01	<i>L. legraeae</i> (Rouy) B.Bock & J.-M.Tison	2x	B100486648, B100486649	FR, Provence-Alpes-Cote d'Azur, Massif des Maures, Collabrières, 210 m	43.2444, 6.3377	Vogt 17192
384-01	<i>L. legraeae</i> (Rouy) B.Bock & J.-M.Tison	2x	B100627809, B100627810	FR, Provence-Alpes-Cote d'Azur, Massif des Maures, 410 m	43.1988, 6.3151	Vogt 17434 & al.
406-01	<i>L. ligusticum</i> Marchetti & al.	2x	B100627838, B100627839	IT, Liguria, La Spezia, Rochetta di Vara, 210 m	44.2470, 9.7728	Vogt 17460 & al.
412-01	<i>L. ligusticum</i> Marchetti & al.	2x	B100627849, B100627850, B100627851	IT, Liguria, Genova, Valetti di Varese, 700 m	44.3603, 9.5105	Vogt 17468 & al.
416-01	<i>L. ligusticum</i> Marchetti & al.	2x	B100627855, B100627856	IT, Liguria, Genova, Piandifieno, 250 m	44.3458, 9.4588	Vogt 17471 & al.
273-02	<i>L. lithopolitanicum</i> (E.Mayer) Polatschek	2x	B100413012	SL, Central Slovenia, Kaminško Savinjske Alpe, 2100 m	46.3633, 14.5715	Oberprieler 10862
274-02	<i>L. lithopolitanicum</i> (E.Mayer) Polatschek	2x	B100413013	AT, Carinthia, Völkermarkt, Vellacher Kotschna, 1999 m	46.375, 14.5663	Oberprieler 10864
128-01	<i>L. monspeliense</i> (L.) H.J.Coste	2x	B100464618	FR, Occitania, Garde, Mas Méjean, 750 m	44.0888, 3.5786	Vogt 16712 & al.

Sample	Taxon	Ploidy	Voucher specimens	Locality	Coordinates (latitude, longitude)	Collectors
131-02	<i>L. monspeliense</i> (L.) H.J.Coste	2x	B100464615	FR, Occitania, Garde, Gardon de St. Jean, 380 m	44.1412, 3.7316	Vogt 16716 & al.
340-01	<i>L. monspeliense</i> (L.) H.J.Coste	2x	B100486666, B100486667	FR, Occitania, Aveyron, Decanzeville, 184 m	44.5822, 2.1840	Vogt 17156 & al.
40-09	<i>L. pluriflorum</i> Pau subsp. <i>pluriflorum</i>	2x	B100413758	ES, Galicia, Coruña, Cabo Finisterre, 100 m	42.8838, -9.2726	Högl 40
42-04	<i>L. pluriflorum</i> Pau subsp. <i>pluriflorum</i>	2x	No voucher	ES, Galicia, Coruña, Caión – Lemaio, 150 m	43.3069, -8.6186	Högl 42
55-01	<i>L. pluriflorum</i> Pau subsp. <i>pluriflorum</i>	2x	B100413749	ES, Galicia, Lugo, Cangas, 10 m	43.6309, -7.3330	Högl 55
60-01	<i>L. pluriflorum</i> subsp. <i>cantabricum</i> (Font Quer & Guinea) T.Ott & al.	2x	B100413746	ES, Galicia, Os Ancares, Piornedo, 1530 m	42.8315, -6.8569	Högl 60
62-01	<i>L. pluriflorum</i> subsp. <i>cantabricum</i> (Font Quer & Guinea) T.Ott & al.	2x	B100413744	ES, Galicia, Lugo, Murias, 750 m	42.9249, -6.8657	Högl 62
159-11	<i>L. pluriflorum</i> subsp. <i>gallaecicum</i> (Rodr.Oubiña & S.Ortiz) T.Ott & al.	2x	B100386789, B100420775, B100464989	ES, Galicia, Pontevedra, Basadre, 375 m	42.8498, -7.9878	Konowalik KK67 & Ogródowczyk
161-03	<i>L. pluriflorum</i> subsp. <i>gallaecicum</i> (Rodr.Oubiña & S.Ortiz) T.Ott & al.	2x	No voucher	ES, Galicia, Corunna, Barazon Grande, 380 m	42.8533, -7.9994	Konowalik s.n. & al.
446-01	<i>L. rotundifolium</i> (Willd.) DC.	2x	No voucher	PL, Podkarpackie, Bieszczady, 920 m	49.1191, 22.5776	Konowalik 20180622-02-01
447-01	<i>L. rotundifolium</i> (Willd.) DC.	2x	No voucher	RO, Bihor, Bihor, 1230 m	46.5189, 22.6613	Konowalik 20180713-03-01
448-01	<i>L. rotundifolium</i> (Willd.) DC.	2x	No voucher	RO, Hunedoara, Râu de Morit, 1140 m	45.3159, 22.7705	Konowalik 20180807-03-01
449-01	<i>L. rotundifolium</i> (Willd.) DC.	2x	No voucher	BH, Central Bosnia Canton, Vranica Planina, 1860 m	43.95782, 17.7403	Konowalik 20180714-03-01

Sample	Taxon	Ploidy	Voucher specimens	Locality	Coordinates (latitude, longitude)	Collectors
450-01	<i>L. rotundifolium</i> (Willd.) DC.	2x	No voucher	PL, Lesser Poland Voivodeship, Sucha County, Babia Góra, 1100 m	49.5879, 19.5515	Konowalik 20170920-01
278-01	<i>L. tridactylites</i> (A.Kern. & Huter) Huter & al.	2x	B100464207	IT, Abruzzo, Pescara, Majella, Blockhaus, 2080 m	42.1384, 14.1101	Tomasello 417
278-05	<i>L. tridactylites</i> (A.Kern. & Huter) Huter & al.	2x	B100464207	IT, Abruzzo, Pescara, Majella, Blockhaus, 2080 m	42.1384, 14.1101	Tomasello 417
225-02	<i>L. virgatum</i> (Desr.) Clos	2x	B100411746	FR, Provence-Alpes-Côte d'Azur, Alpes-Maritimes, Lantosque – St.-Jean-la-Rivière, 430 m	43.9538, 7.2961	Vogt 16892 & Oberprieler
250-01	<i>L. virgatum</i> (Desr.) Clos	2x	B100350169, B100350172	IT, Liguria, Savona, Ranzo – Ortovero, 215 m	44.0596, 8.0583	Vogt 16932 & Oberprieler
184-01	<i>L. vulgare</i> Lam. subsp. <i>vulgare</i>	2x	B100346626	BH, Gacko, Nevesinje, Ribari – Rilja, 930 m	43.2403, 18.3364	Vogt 16806 & Prem-Vogt
58-02	<i>L. vulgare</i> Lam. subsp. <i>vulgare</i>	2x	B100413748	ES, Galicia, Lugo, Santa Mariña – Reboredo, 490 m	42.8205, -7.9504	Höfl 58
94-01	<i>L. vulgare</i> Lam. subsp. <i>vulgare</i>	2x	B100464674	FR, Occitania, Aude, Carcassone, Montlaur, 160 m	43.1294, 2.6073	Vogt 16641 & al.
L046-07	<i>L. vulgare</i> Lam. subsp. <i>vulgare</i>	2x	B100550249	DE, Bavaria, Regensburg, Deuerling, 450 m	49.0333, 11.8833	Eder & Oberprieler s.n.
M02-01	<i>L. vulgare</i> subsp. <i>barrelieri</i> (Dufour ex DC.) O.Bolós & Vigo (= <i>L. pyrenaicum</i> Vogt & al.)	2x	B100297950	ES, Aragón, Huesca, San Juan de la Peña, 755 m	42.5250, -0.6690	Cordel 2
266-01	<i>L. vulgare</i> subsp. <i>barrelieri</i> (Dufour ex DC.) O.Bolós & Vigo (= <i>L. pyrenaicum</i> Vogt & al.)	2x	B100464208	ES, Aragon, Huesca, Balneario de Panticosa, 1650 m	42.7806, -0.2467	Tomasello TS382
266-02	<i>L. vulgare</i> subsp. <i>barrelieri</i> (Dufour ex DC.) O.Bolós & Vigo (= <i>L. pyrenaicum</i> Vogt & al.)	2x	B100464208	ES, Aragon, Huesca, Balneario de Panticosa, 1650 m	42.7806, -0.2467	Tomasello TS382
267-03	<i>L. vulgare</i> subsp. <i>barrelieri</i> (Dufour ex DC.) O.Bolós & Vigo (= <i>L. pyrenaicum</i> Vogt & al.)	2x	B100464210	ES, Aragon, Huesca, Angel Orus el Forcau, 2000 m	42.6327, 0.4530	Tomasello TS392
45-01	<i>L. cantabricum</i> Sennen	4x	B100413756	ES, Galicia, O Eume, Portocobo – Aurela, 350 m	43.3972, -8.0959	Höfl 45

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50-01	<i>L. cantabricum</i> Sennen	4x	B100413752	ES, Galicia, Ortegal, Viñan – Serantes, 10 m	43.6749, -7.9022	Höfl 50
50-02	<i>L. cantabricum</i> Sennen	4x	B100413752	ES, Galicia, Ortegal, Viñan – Serantes, 10 m	43.6749, -7.9022	Höfl 50
50-03	<i>L. cantabricum</i> Sennen	4x	B100413752	ES, Galicia, Ortegal, Viñan – Serantes, 10 m	43.6749, -7.9022	Höfl 50
66-01	<i>L. crassifolium</i> (Lange) Lange	4x	B100413740	ES, Asturias, Luanco, Cabo de Peñas, 60 m	43.6565, -5.8510	Höfl 66 & Himmelreich
66-02	<i>L. crassifolium</i> (Lange) Lange	4x	B100413740	ES, Asturias, Luanco, Cabo de Peñas, 60 m	43.6565, -5.8510	Höfl 66 & Himmelreich
69-01	<i>L. crassifolium</i> (Lange) Lange	4x	B100413737	ES, Cantabria, San Vicente de la Barquera, 50 m	43.3943, -4.3571	Höfl 69 & Himmelreich
69-02	<i>L. crassifolium</i> (Lange) Lange	4x	B100413737	ES, Cantabria, San Vicente de la Barquera, 50 m	43.3943, -4.3571	Höfl 69 & Himmelreich
424-01	<i>L. delarbrei</i> Timb.-Lagr. subsp. <i>delarbrei</i>	4x	B100605498, B100605497, B100605489	FR, Auvergne-Rhone-Alpes, Cantal, l'Arpon du Diable, 1688 m	45.0569, 2.7461	Vogt 17487 & Prem-Vogt
425-01	<i>L. delarbrei</i> Timb.-Lagr. subsp. <i>delarbrei</i>	4x	B100605488, B100605487, B100605486, B100605501	FR, Auvergne-Rhône-Alpes, Cantal, Col d'Eylac – Brèche de Rolland, 1553 m	45.1050, 2.6847	Vogt 17489 & Prem-Vogt
427-01	<i>L. delarbrei</i> Timb.-Lagr. subsp. <i>delarbrei</i>	4x	B100605494	FR, Auvergne-Rhone-Alpes, Puy-de-Dôme, Puy de Sancy, 1818 m	45.5286, 2.8128	Vogt 17494 & Prem-Vogt
428-01	<i>L. delarbrei</i> Timb.-Lagr. subsp. <i>delarbrei</i>	4x	B100605492, B100603419	FR, Auvergne-Rhone-Alpes, Puy-de-Dôme, Puy de Sancy, 1457 m	45.5364, 2.8125	Vogt 17495 & Prem-Vogt
101-01	<i>L. delarbrei</i> subsp. <i>ruscinonense</i> (Jean. & Timb.-Lagr.) Vogt & al.	4x	B100464658, B100464657	FR, Occitania, Aude, Conques-sur-Orbiel – Lastours, 193 m	43.3279, 2.3835	Vogt 16670 & al.
110-01	<i>L. delarbrei</i> subsp. <i>ruscinonense</i> (Jean. & Timb.-Lagr.) Vogt & al.	4x	B100464637	FR, Occitania, Hérault, Olargues – Bédarieux, 214 m	43.5786, 3.0212	Vogt 16685 & al.
139-01	<i>L. delarbrei</i> subsp. <i>ruscinonense</i> (Jean. & Timb.-Lagr.) Vogt & al.	4x	B100386786	ES, Catalonia, Girona, Maçanet de Cabrenys, 1015 m	42.412, 2.7504	Konowalik KK46 & Ogradowczyk
349-01	<i>L. delarbrei</i> subsp. <i>ruscinonense</i> (Jean. & Timb.-Lagr.) Vogt & al.	4x	B100486690, B100486691, B100486692, B100486693	FR, Occitania, Tarn, Brassac, Rochers de Sarrasy, 502 m	43.6236, 2.4984	Vogt 17171 & al.

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355-03	<i>L. delarbrei</i> subsp. <i>ruscinonense</i> (Jean. & Timb.-Lagr.) Vogt & al.	4x	B100486699, B100486700	FR, Occitania, Hérault, Lodève, Roure de Millau, 182 m	43.7384, 3.3283	Vogt 17177 & al.
106-01	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B100464641	FR, Occitania, Tarn, Mazamet, 410 m	43.4816, 2.3717	Vogt 16678 & al.
177-01	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B100346630	ME, Cetinje, Lovćen, Bieloši, 920 m	42.3681, 18.8903	Vogt 16794 & Prem-Vogt
343-01	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B100486672, B100486673	FR, Occitania, Aveyron, Decanzeville, Firmi, 470 m	44.5589, 2.3114	Vogt 17159 & al.
437-01	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B101003356	FR, Corsica, Corse-du-Sud, Ghisoni – Cozzano, 920 m	41.9727, 9.1843	Vogt 17865 & al.
87-01	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B100464680	IT, Piedmont, Cuneo, Roccavione, 670 m	44.2982, 7.5052	Vogt 16611 & al.
L052-02	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	No voucher	DE, Bavaria, Regensburg, 385 m	48.9833, 12.0833	Eder s.n.
L055-03	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B100627297	DE, Bavaria, Garmisch-Partenkirchen, Laber, 1430 m	47.5833, 11.1167	Eder & Oberprieler 10298
L055-031	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B100627297	DE, Bavaria, Garmisch-Partenkirchen, Laber, 1430 m	47.5833, 11.1167	Eder & Oberprieler 10298
L062-04	<i>L. ircutianum</i> DC. subsp. <i>ircutianum</i>	4x	B100416530, B100627403	AT, Vorarlberg, Kleinwalsertal, Baad, 1380 m	47.3000, 10.1000	Eder, Oberprieler 10304a & Vogt 16222
170-02	<i>L. ircutianum</i> subsp. <i>leucolepis</i> (Briq. & Cavill.) Vogt & Greuter	4x	B100346645	ME, Herceg Novi, Sutorina, 34 m	42.4742, 18.4731	Vogt 16724 & Prem-Vogt
170-021	<i>L. ircutianum</i> subsp. <i>leucolepis</i> (Briq. & Cavill.) Vogt & Greuter	4x	B100346645	ME, Herceg Novi, Sutorina, 34 m	42.4742, 18.4731	Vogt 16724 & Prem-Vogt
174-01	<i>L. ircutianum</i> subsp. <i>leucolepis</i> (Briq. & Cavill.) Vogt & Greuter	4x	B100346612, B100346613	ME, Cetinje, Lovćen, Njeguši, 900 m	42.4389, 18.8319	Vogt 16790 & Prem-Vogt
329-02	<i>L. ircutianum</i> subsp. <i>leucolepis</i> (Briq. & Cavill.) Vogt & Greuter	4x	B100464093, B100464094	IT, Abruzzo, Pescara, Piano d'Orta, 125 m	42.2447, 13.9659	Oberprieler 10870

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371-01	<i>L. ircutianum</i> subsp. <i>leucolepis</i> (Briq. & Cavill.) Vogt & Greuter	4x	B100486717	HR, Primorje-Gorski Kotar, Vela Učka, 770 m	45.2772, 14.1944	Vogt 17198 & Prem-Vogt
323-03	<i>L. meridionale</i> Legrand	4x	B100464096, B100458572	FR, Occitania, Aveyron, Decanzeville, Firmi, 388 m	44.5514, 2.3044	Oberprieler 10867
323-04	<i>L. meridionale</i> Legrand	4x	B100464096, B100458572	FR, Occitania, Aveyron, Decanzeville, Firmi, 388 m	44.5514, 2.3044	Oberprieler 10867
323-05	<i>L. meridionale</i> Legrand	4x	B100464096, B100458572	FR, Occitania, Aveyron, Decanzeville, Firmi, 388 m	44.5514, 2.3044	Oberprieler 10867
7-02	<i>L. pseudosylvaticum</i> (Vogt) Vogt & Oberpr.	4x	B100413784	PT, Bragança, Izeda – Santulhão, 350 m	41.5582, -6.6754	Höfl 7 & Hutschenreuther
1-05	<i>L. pseudosylvaticum</i> (Vogt) Vogt & Oberpr.	4x	B100413790	ES, Galicia, Lugo, Pedrafita, 1100 m	42.7267, -7.0258	Höfl 1 & Hutschenreuther
3-08	<i>L. pseudosylvaticum</i> (Vogt) Vogt & Oberpr.	4x	B100413788	ES, Galicia, Ourense, Rubiá – O Real, 470 m	42.4634, -6.8950	Höfl 3 & Hutschenreuther