

SUPPLEMENTARY DATA

Appendix S1. Herbarium specimens studied for taxonomic delimitation and measurement of flower traits (spur length and tube width). Herbarium abbreviations: ATH, Goulandris Natural History Museum, Athens, Greece; BM, The Natural History Museum, London, UK; FI, Natural History Museum, Firenze, Italy; K, Royal Botanic Gardens, Kew, UK; LD, The Natural History Museum, Lund, Sweden; MA, Real Jardín Botánico, Madrid, Spain; MPU, Université Montpellier 2, Montpellier, France; RAB, Institut Scientifique, Rabat, Morocco; RNG, University of Reading, Reading, UK; S, Swedish Museum of Natural History, Stockholm, Sweden.

L. algarviana

Portugal: Cabo de São Vicente, 1-IV-2010, B. Estébanez (MA); Cabo de São Vicente, 24-III-2009, M. Fernández-Mazuecos 11MF09 (MA); Cabo de São Vicente, 14-II-1941, Pinto da Silva (MA).

L. bipartita

Morocco: Bosque de las dunas de Buanamara, V-1913, Dantin (MA); Sidi Bou Knadel, IV-1933, Gattefossé (MA); Mogador, date unknown, Broussonet (MA); Safi, 18-IV-1924, E. Jahandiez (MA); entre Berrechid y Sidi Mohammed el Kebir, 18-IV-1989, M.A. Carrasco *et al.* (MA); Prov. Kenitra, c. 40 km N of Kenitra on road to Moulay Bouselham, 25-V-2002, S.L. Jury 19270 (MA); Safi, pr. oppidulum Tamri, loco dicto Assif Tamri, 23-V-1985, C. Blanché *et al.* (MA); Safi, pr. oppidulum Tamri, loco dicto Assif Tamri, 23-V-1985, C. Blanché *et al.* (MA); dunas de Buanamara, camino a Larache, date unknown, Dautin (MA); Rabat, by gate to botanic garden of Institut Agronomique et Vétérinaire Hassan II at entrance to club ACSA, 22-I-2000, S.L. Jury 18558 (RNG); Larache, entre Ksar-el-Kebir y Larache, cerca de la fábrica de azúcar, 17-III-1995, M.A. Mateos *et al.* (RNG); 57 km NW of Agadir, main road to Essaouira 4 km N of Tamri, 18-III-1994, S.L. Jury 14293 (RNG); c. 50 km S Larache, rd Souk El Arbaa to Moulay-Bouselham, 24-II-1994, S.L. Jury 13217 (RNG); Safi, pr. oppidulum Tamri, loco dicto Assif Tamri, 23-V-1985, C. Blanché *et al.* (RNG); Hab. in arenosis, c. El Araix, l. El Mensah, 8-II-1930, Font Quer (RNG); between Tamri and Cap Rhir, 1-IV-1972, Davis 53945 (RNG); Cap Beddouza (N of Safi), 7-IV-1972, Davis 54169 (RNG); between Oualidia and Cap Beddouza, 25-III-1972, D. Bramwell *et al.* (RNG); above Sidi Mousa (nr. Tiznit), 19-III-1972, Davis 53551 (RNG); 5 km S of Cap Beddouza, Sidi Bouchta, 29-III-1974, Miller, Russell & Sutton 195 (RNG); 50 km NE of Marrakech, near Tamelet, Miller, Russell & Sutton 792 (RNG); 25 SW of Tafraoute, between Tiznit and Tafraoute, 3-IV-1974, Miller, Russell & Sutton 651 (RNG); Essaouira, wooded sand-dunes along coast S of Essaouira, 26-III-1972, D. Bramwell, I.B.K. Richardson & B.G. Murray 196 (RNG); route de Rabat à Témara, 13-IV-1976, J. Lewalle 8309 (RNG); 1 km S of El-Jadida, El-Jorf-Lasfar, 29-III-1974, Miller, Russell & Sutton (RNG); 2 km S of Rabat, El Harhoura, 28-III-1974, Sutton, Miller & Russell 91 (RNG).

L. bordiana subsp. *bordiana*

Algeria: Bou Tlélis, forêt de M'Sila, 25-III-1932, R. Le Cesve (RNG); 20 km E of Oran, Kristel to Aïn Franin, 16-IV-1976 D.A. & S.J. Sutton 248 (RNG); Bou Tlélis, forêt de M'Sila, 25-III-1932, R. Le Cesve (MA); El Ancor, alrededores de Oran, IV-1922, Ch. d'Alleizette (MA).

L. bordiana subsp. *kralikiana*

Algeria: 55 km E of Mostagenem, E of Sidi Lakhdar, 14-IV-1976, D.A. & S.J. Sutton 172 (RNG); 49 miles from Mostaganem to Tenes, 30-IV-1971, Davis 51833 (RNG).

L. clementei

Spain: Málaga, Alhaurín de la Torre, 5-V-2008, M. Fernández-Mazuecos 7MF08 (MA); Málaga, puerto de Ojén, entre Ojén y Coín, 15-VI-1994, A. Aparicio *et al.* 7404 MV (MA); Málaga, cerro de Carratraca, Sierra Blanquilla, 12-V-1979, P. Cantó *et al.* 1065 GF (MA); Málaga, pr. Carratraca, 25-V-2008, C. Aedo 15732 (MA); 6 km südlich Coín, zwischen Coín und Mijas, 21-V-1999, M. Nydegger 36574 (MA); Málaga, Mijas, 29-VIII-1980, G. López 2473 GF (MA); Málaga, Yunquera, 24-V-1999, C. Aedo *et al.* CN-2295 (MA).

L. dissita

Algeria: O. Hauts plateaux à Arbaout, VI-1857, A.N. Pomel (MPU); Hauts plateaux Oranais, Mou el Gtouta, V-1862, A.N. Pomel (MPU).

L. elegans

Portugal: Tras-os-Montes, Vila Real, Montalegre, Meixedo, 10-VI-2010, A. Herrero *et al.* AH4209 (MA); Tras-os-Montes, Vila Real, Montalegre, Pitoes das Junias, 9-VI-2010, A. Herrero *et al.* AH3993 (MA).

Spain: Cuenca, El Tobar, 5-VI-2009, M. Fernández-Mazuecos 55MF09 (MA); Cáceres, Eljas, Puerto de San Martín, 15-VI-2009, M. Fernández-Mazuecos 58MF09 (MA); Ávila, Puerto de Peña Negra, 8-V-2009, M. Fernández-Mazuecos & P. Vargas 41MF09 (MA); Cuenca, Santa María del Val, 5-VI-2009, M. Fernández-Mazuecos 56MF09 (MA); Pontevedra, Caldas de Reis, 12-V-2009, M. Fernández-Mazuecos 43MF09 (MA); Madrid, Somosierra, 3-VII-2008, M. Fernández-Mazuecos & A. Bañón, 32MF08 (MA); Ávila, Puerto del Tremedal, 5-VII-2008, M. Fernández-Mazuecos 33MF08 (MA); León, Villafrea de la Reina, 10-VII-2008, M. Fernández-Mazuecos & D. Orgaz 39MF08 (MA); León, Isoba, subiendo hacia el puerto de San Isidro, 11-VII-2008, M. Fernández-Mazuecos & D. Orgaz 40MF08 (MA); Ávila, Puerto de Casillas, 27-VI-2008, M. Fernández-Mazuecos & B. Estébanez 27-VI-2008 (MA); Burgos, Neila, carretera hacia Villavelayo, 26-VI-2009, M. Fernández-Mazuecos & B. Estébanez 72MF09 (MA); Zamora, Ribadelago, entre Ribadelago Nuevo y Ribadelago Viejo, 29-VII-2008, M. Fernández-Mazuecos 48MF08 (MA); Orense, San Xoán de Río, 29-VII-2008, M. Fernández-Mazuecos 48MF08 (MA); Ávila, Navarredonda de Gredos, frente al Parador, 22-VI-2008, M. Fernández-Mazuecos 29MF08 (MA); Burgos, subiendo hacia el pico Cerezales, 26-VI-2009, M. Fernández-Mazuecos 73MF09 (MA); Salamanca, Navasfrías, Puerto Viejo, 15-VI-2009, M. Fernández-Mazuecos 57MF09 (MA); La Coruña, Santiago de Compostela, junto a la vía del tren, 12-V-2009, M. Fernández-Mazuecos 42MF09 (MA); Madrid, Puerto de Canencia, 26-VI-2008, M. Fernández-Mazuecos (MA); Ávila, Puerto de Menga, 22-VI-2008, M. Fernández-Mazuecos 28MF08 (MA); Ávila, Puerto del Pico, hacia el Risco del Duque, 22-VI-2008, M. Fernández-Mazuecos 27MF08 (MA); La Coruña, Brión, Pedrouzos, 21-V-2006, J. Amigo (MA); Lugo, Sierra de Ancares, cumbre del Mustallar, 28-VI-1982, S. Castroviejo *et al.* 6963 SC (MA); La Rioja, Mansilla de la Sierra, río Cambrones, 28-V-1988, J. Arizaleta *et al.* 3045 JP (MA); Teruel, Sierra de Albarracín, date unknown, Almagro (MA); Teruel, Fuente del Puerto, Orihuela a Bronchales, 13-VI-1988, G. Mateo (MA); La Rioja, Mancomunidad de Canales de la Sierra, Mansilla y Villavelayos, barranco Cambrones, 30-V-1993, M.L. Gil Zúñiga & J.A. Alejandro (MA); Cáceres, Puerto de Tornavacas, 2-V-1987, E. Villanueva & I. Benítez 722EVG (MA); Burgos, roquedos sobre el Arlanzón, 19-VI-1976, E. Fuentes (MA); Ávila, Puerto de Mijares, montaña Gamonosa, 5-VII-2008, A. Quintanar *et al.* AQ2917 (MA); Cuenca, Beteta, fuente de Pérez, 13-V-2010, Ó. García Cardo, OGC-01308 (MA); Madrid, El Escorial, Puerto de la Cruz Verde, 10-VII-2008, P. Vargas *et al.* 134PV08 (MA); a la derecha del camino de los prados de S. Bartolomé, El Tobar, Cuenca, 12-VI-1942, A. Rodríguez (MA).

L. gattefossei

Morocco: Beni-Mellal, al E de Tizi-N-Aït-Ouirra, 1-VI-1998, F. Gómiz (MA); provincia de Beni Mellal, región de El Ksiba, 5-VII-2006, A. Quintanar *et al.* AQ2025 (MA); Quercetum sur terrain décalcifié, au Tizi n'Aït Ouirah, El Ksiba, 28-VI-1929, J. Gattefossé (RAB).

L. gharbensis

Morocco: Temara, 24-I-1986, J. Lewalle 11270 (MA); Meknès-Tafilalet, Azrou vers El-Hajeb, 2-IV-2010, T. Buirra *et al.* JC4472 (MA); Rabat, Avicenne, 15-II-1993, J. Lewalle 13880 (MA); Tiflet, 14-IV-1996, J. Lewalle 14027 (MA); Tetuán, 21-V-1928, Font i Quer (MA); Hefrán?, 6-IV-1926, Vidal y López 533 (MA); NE of Chefchaouen, near mosque W of Bou Ahmed, 26-II-1994, S.L. Jury 13406 (RNG); Rabat, by gate to botanic garden of Institut Agronomique et Vétérinaire Hassan II at entrance du club ACSA near Soukaina Mosque, 22-I-2000, S.L. Jury 18559 (RNG); Chefchaouen, Bab Taza, cumber de Bab el Karn, sobre el collado de la pista a Fifi, 19-VI-1993, J. Monsterrat & J. Vicens JMM-4193/5 (RNG); Tetouan, Souk el Arba de Beni Hassim, Tayenza, 6-VI-1996, M.A. Mateos & J.M. Montserrat JMM-5453/4 (RNG); 16 km S of Rabat, Temara –plage, 28-III-1974, Sutton, Miller & Russell 120 (RNG); Temara, 24-I-1986, J. Lewalle 11270 (RNG); Cabo Negro, 15 km N of Tetouan, 10-IV-1971, Davis 51160 (RNG); Tetuán, 21-V-1928, Font i Quer (RNG); 40 km S of Rabat, 29-III-1974, Miller, Russell & Sutton 156 (RNG).

Spain: Huelva, Gibraleón, junto a Vía Verde, 17-III-2009, M. Fernández-Mazuecos *et al.* 7MF09 (MA); Huelva, Gibraleón, Vía Verde del Litoral, 9-IV-2008, E. Sánchez-Gullón (MA); Huelva, Los Medios, Aljaraque, 26-IV-2006, E. Sánchez-Gullón (MA); Huelva, Cartaya, 3-IV-1996, E. Sánchez-Gullón (MA).

L. hellenica

Greece: Peloponnisos, prov. Lakonia, distr. Epidhavros/Limiras, settlement of Kambos, Neapolis (Vion), 27-III-1959, collector unknown (ATH).

L. imzica

Morocco: ladera NE del Jbel Imzi, AntiAtlas, 6-IV-2004, F. Gómiz (MA); Sous-Massa-Daraâ, Anezi, Agadir-ogjgal, jbel Imzi, ladera norte, 6-VI-2009, J. Calvo *et al.* JC3813 (MA); AntiAtlas occidental, ladera NE Jbel Imzi, 13-IV-2007, T. Buirra & J. Calvo 232 (MA).

L. incarnata

Portugal: Alto Alentejo, Montemor-o-Novo, Escoural, estrada entre Escoural e Casa Branca, 9-III-2006, D. Espírito Santo *et al.* (MA); Pinhel, entre Ervas Tenras e Malta ao km 109.7, 28-VI-1970, Regeira, Serra do Bernardino (MA); Alto Alentejo, Serra de S. Mamede, prox. da Torre Caldeira, 5-V-1957, Malato-Beliz *et al.* (MA); Casa-Branca, IV-1915, G. Sampaio (MA); Beira Litoral, Coimbra, pinhal de Marrocos, 26-V-1954, A. Matos & A. Marques (MA); Beira Baixa, Penamaçor, Serra da Malcata, 12-V-1970, J. Malato-Beliz & J.A. Guerra (MA); Alto Alentejo, entre Santa Eulalia e Monforte, 2-IV-1954, Malato-Beliz (MA); Alto Alentejo, Nisa, Nossa Senhora da Graça, 4-V-1971, Malato-Beliz & J.A. Guerra (MA).

Spain: Cáceres, Valencia de Alcántara, near ermita de Barbón, 27-IV-1994, Optima Inter VI 884 (RNG); Cáceres, borde de carretera en término de Torrejón el Rubio, 9-VI-1993, J.L. Pérez Chiscano (RNG); Mozárbez (Espagne, prov. Salamanca), route vers Monterrubio de la Sierra, 15-V-1983, M. Ladero & F.J. González (RNG); Badajoz, Alburquerque, finca El Hito, 24-III-2009, M. Fernández-Mazuecos 9MF09 (MA); Zamora, cerca de Bercianos de Aliste, los Carballos, 31-V-10, B. Estébanez & N. García (MA); Salamanca, Pelabravo, arroyo Gargabate, 5-V-2009, M. Fernández-Mazuecos & P. Vargas 39MF09 (MA); Cáceres, Valencia de Alcántara, Majadallana, 8-IV-2004, M. de la Estrella 3 (MA); Cáceres, Valencia de Alcántara, cercanías de la ermita de Barbón, 27-IV-1994, VI Itinera Mediterranea 884 (MA); Morille, Salamanca, 16-V-1998, E. de Paz (MA); Monfragüe, pantano del Tiétar, Cáceres, 21-IV-1987, A. Segura Zubizarreta 34555 (MA); Cáceres, Torrejón el Rubio, 24-III-1982, Ladero *et al.* (MA); Cáceres, borde de carretera en término de Torrejón el Rubio, 9-VI-1993, J.L. Pérez Chiscano (MA); suelo arenoso-lignoso plio-cuaternario de km 43 de carretera de Torrejón el Rubio a Trujillo, Cáceres, 12-IV-1977, J.L. Pérez Chiscano (MA); Cáceres, Torrejón el Rubio, Monfragüe, 10-IV-1980, D. Belmonte (MA); Badajoz, Alburquerque, 19-IV-1978, J.L. Pérez Chiscano (MA); suelo sobre granitos del término de Santibáñez Alto, Cáceres, 16-IV-1991, J.L. Pérez Chiscano (MA).

L. mamorensis

Morocco: ctra. Kenitra-Khemisset, a unos 20 kms de Kenitra, 17-IV-2006, S. Martín-Bravo *et al.* 34SMB06 (MA); Tánger-Tétouan, Larache, pr. Lixus, 9-IV-2009, J. Calvo & I. Espejo JC3481 (MA); 12

km S of Marrakech, road to Asni, 19 km N of Tahanoute, 15-III-1994, S.L. Jury 14151 (MA); abords de la forêt de la Mamora, près de l'aéroport de Rabat-Salé, 15-III-1977, M. Atbib (MA); Kenitra, IV-1933, J. Gattefossé (MA); c. El Araïx, l. El Mensah, 8-II-1930, Font Quer (MA); reg. Rabat, 10 km W de Tiflete, 1955, Sauvage (MA); prov. de Salé 7 km a l'E de Salé, route vers Meknès, Layayda, 18-III-1995, J. Lambinon 95/Ma/333 (MA); playa de Tánger, IV-1921, C. Pau (MA); Larache, 1914, Pérez Camarero (MA); Mamora, Aïn Jorra, 1-V-1924, E. Jahandiez (MA); prov. de Salé 7 km a l'E de Salé, route vers Meknès, Layayda, 18-III-1995, J. Lambinon 95/Ma/333 (RNG); Rabat, forêt de la Mamora, carretera de Rabat a Meknès, km 17, 24-V-1994, M.J. Díez *et al.* (RNG); Tetouan, entre Asilah y Larache, Tnine-Sidi-El-Yaman, 20-IV-1988, Silvestre *et al.* (RNG); 12 km S of Marrakech, road to Asni, 19 km N of Tahanoute, 15-III-1994, S.L. Jury 14151 (RNG); Safi, prope Tamri, 1-V-1992, Fernández-Casas 13710 & Molero (RNG); sol sableux, siliceux, près de la forêt de la Mamora près Aéroport-Rabat-Salé, 15-III-1977, M. Atbib (RNG); near Sidi Yahya du Rhab, E of Rabat, 2-III-1982, I.R. Smith 33 (RNG); Forêt de la Mamora au NE de Rabat, 4-I-1980, F. & J. Damblon 80/5 (RNG); diplomatic forest between Tangier and Asilah, 6-IV-1971, Davis 51003 (RNG).

L. maroccana

Morocco: a 4 km de Boujad, cerca de Kasba-Tadla, 12-VI-1982, Fernández-Casas *et al.* FC 6738 (MA); Marrakech, inter Tahnaout et Oukaïmedene, prope oppidulum Tadmamt, 28-V-1985, C. Blanché *et al.* (MA); Tlata Ida Gougmar, carretera S-7076, 5-III-2001, J. Arrington *et al.* (MA); Agadir, Col du Kerdouss, 24-V-1985, C. Blanché *et al.* (MA); High Atlas, S of Marrakech, on road to Tizi-n-Test, near Mosque at Tin Mal, 16-III-1994, S.L. Jury 14209 (RNG); High Atlas, Imouzzer Valley, N of Agadir, 2006, M. Ait Lafkih (RNG); Marrakech, inter Tahnaout et Oukaïmedene, prope oppidulum Tadmamt, 28-V-1985, C. Blanché *et al.* (RNG); High Atlas, Asni, 7 km from Tahanoute on road to Oukaïmeden, 13-VI-1974, Reading Univ. / B.M. Exped. 675 (RNG).

L. multicaulis subsp. aurasiaca

Algeria: c. Aurès, Ras Pharaoun, 18-VI-1874, A.N. Pomel (MPU).

Tunisia: below El Kesra, East of Maktar, 3-V-1975, Davis & Lamond D.57154 (RNG).

L. multicaulis subsp. galioides

Morocco: High Atlas, c. 70 km from Marrakech, c. 400 m below Oukaïmeden along road to Marrakech, 23-IX-2000, S.L. Jury 18628 (RNG); High Atlas Vallée du Zat, Yagour, 'Zib Zguigui, 2-VI-2007, A. Kool 904 (RNG); High Atlas, S of Marrakech, ski resort of Oukaïmeden, 25-VII-1997, S.L. Jury 18089 (RNG); Oukaïmeden village and environs, 17-VII-1989, M. Ait Lafkih *et al.* 525 (RNG); 72 km S of Marrakech, Oukaïmeden, 3-VII-1987, S.L. Jury *et al.* 8844 (RNG); prov. de Marrakech, Hoher Atlas, an der Straße nach Oukaïmeden, ca. 6 km unterhalb Oukaïmeden, 13-VII-1989, D. Podlech 48008 (MA); prov. de Marrakech, Hoher Atlas, Umgebung von Oukaïmeden und Berge S des Ortes, 14/16-VII-1989, D. Podlech 48067 (MA); High Atlas, S of Marrakech, ski resort of Oukaïmeden, 25-VII-1997, S.L. Jury 18089 (MA); distrito de Beni-Mellal, en la pista de Aït Mhammed a Ifrane, desviación a Zawayat Oulmzi, 4-VI-2006, Medina *et al.* LM3548 (MA); Alto Atlas, Adrar-n-Oukaïmeden, vertiente N, 29-VI-2006, A. Herrero *et al.* AH 3035 (MA); Marrakech, Oukaïmedene, pista por encima de la estación de esquí, 11-VII-1984, G. López & F. Muñoz Garmendia (MA); Alto Atlas, Oukaïmeden, alrededores del poblado, 6-VII-1997, J. Güemes *et al.* JGH-1610 (MA); Ouarzazate, El Kelaa des Mgouna, Amesker, Tizi N'Aït Hamad, 17/18-VII-1984, G. López & F. Muñoz Garmendia 9189 GL (MA); Alto Atlas, Jbel Anngour, pr. Oukaïmeden, 6-VII-1997, J. Güemes *et al.* JGH-1617 (MA); Alto Atlas, Jbel Siroua, entre Amassine y Tala, poco después de Tizi-n-Tleta (Tizi Touggoukine), 30-VI-1997, J. Güemes *et al.* JGH-1494 (MA); djebel Ghat Demnet, IV-1885, J. Ball (FI); South Morocco, Greater Atlas, Revaia, V-1871, Hooker (K).

L. multicaulis subsp. heterophylla

Algeria: 10 miles NE of Mostaganem, 30-IV-1971, Davis 51853 (RNG); Dj. Djurdjura, near Tikjda, 3-VI-1971, Davis 53078 (RNG); Tikdjda, parque nacional Djurdjura, 19-VII-2011, J.J. Aldasoro A-19066 (MA).

Morocco: Meknès, ad lacum Aguelmame Azigza dictum, 3-VI-1985, C. Blanché *et al.* (RNG); Middle Atlas, prov. Ifrane, 5.3 on road from Azrou to Midelt, 6-VI-2007, S.L. Jury & R. Shkwa 20911 (RNG); Marrakech, cerca de Oukaimeden, Tazenah, 2-VI-1980, Fernández-Casas FC 3342 (RNG); Atlas Medio, Jbel bou Drâa, al norte del Jbel Hedri, 13-VI-1996, M.A. Mateos & J.M. Montserrat JMM-5991/4 (RNG); Chefchaouen, Talembote, Jbel Tazaout, 21-VI-1993, J. Montserrat *et al.* JMM-4228/5 (RNG); Taza, Jbel Tazzeke, 11-VI-1996, M.A. Mateos & J.M. Montserrat JMM-5865/2 (RNG); Taza, Djebel Berkane, 25-V-1994, M.J. Díez *et al.* (RNG); Central Rif, Jbel Tighighine, 13-VI-1995, A. Boratynski & A. Romo R-8651/6 (RNG); Targuist, carretera de Targuist a Al Hoceima, Jbal el Bâbet, a 6 km de Beni Hadifa, 12-V-1994; F. Bombardó *et al.* JMM-5253/4 (RNG); High Atlas, Ayachi, NW facing cliffs Ayachi, 20 km from Midelt, 22-VI-1974, Reading Univ. / B.M. Exped. 952 (RNG); carretera Azrou-Midelt, a unos 5 km de Azrou, 16-V-2008, M. Fernández-Mazuecos & J.C. Moreno 16MF08 (MA); Taza, Jbel Tazekka, 23-VI-2008, E. Rico *et al.* SA-221 (MA); carretera Azrou-Midelt, a 7 km de Azrou, 16-V-2008, M. Fernández-Mazuecos & J.C. Moreno 15MF08 (MA); Ifrane, a la izquierda de la carretera hacia Boulemane, 16-V-2008, M. Fernández-Mazuecos & J.C. Moreno 12MF08 (MA); Jbel Hebri, 18-V-2008, M. Fernández-Mazuecos & J.C. Moreno 17MF08 (MA); Tizi-n-Tretten, 16-V-2008, M. Fernández-Mazuecos & J.C. Moreno 13MF08 (MA); Marrakech, cerca de Oukaimeden, Tazenah, 2-VI-1980, Fernández-Casas FC 3342 (MA); hab. in cistetis, supra emporium Sok-et-Tnin d. (Beni Hadifa), 26-V-1927, Font Quer (MA); Middle Atlas, prov. Ifrane, 5.3 km along road from Azrou on way to Midelt, 6-VI-2007, S.L. Jury & R. Shkwa 20911 (MA); Azrou, bosque de cedros, 13-VI-1990, M.A. Carrasco *et al.* (MA); Beni-Hadifa, ctra. hacia Targuist, 23-IV-2004, J. Martínez *et al.* 108bBGA04 (MA); Col de Tanout ou Fillal, 6-VII-2006, A. Quintanar *et al.* AQ2106 (MA); Azrou, pista forestal hacia Aïn Leuh, 23-VII-1984, G. López & F. Muñoz Garmendia (MA); Moyen Atlas, forêt de Bikrit, 4-VII-1996, S. Cirujano *et al.* (MA); Ksar Es Souk, col du Zad, 19-VI-1982, Fernández-Casas *et al.* FC 7111 (MA); Atlas Medio, S de Timhadit, 26-VI-1997, C. Aedo *et al.* CA 4239 (MA); Jbel Lakra, collado encima de la casa forestal, 20-VI-1997, E. Rico *et al.* 6004ER (MA); Atlas Medio, refugio de Taffert, 25-VI-1997, C. Aedo *et al.* CA 4231 (MA).

Tunisia: Tabarka, 3-V-2002, J.J. Aldasoro A-2888 (MA); gobernación de Nabeul, península del Cap Bon, cercanías de Taklisah, 31-III-2009, A. Quintanar *et al.* AQ3264 (MA).

L. multicaulis* subsp. *multicaulis

Italy: Sicilia, Catania, cerca de Bronte, 6-VI-2000, Álvarez *et al.* IA 1570 (MA); Sicilia, Palermo, La Pizzuta, pr. Portella della Páglia, 30-V-2000, Aedo *et al.* 5713 (MA); Sicilia, Catania, Parco dell Etna, Bosco Cerrita, 6-VI-2000, Álvarez *et al.* IA 1622 (MA).

L. nigricans

Spain: Almería, Tabernas, 21-IV-2009, M. Fernández-Mazuecos & P. Vargas 31MF09 (MA); Almería, Tabernas, 13-III-2008, P. Vargas 3PV08 (MA); Almería, Cabo de Gata, junto a las Salinas, 24-III-2010, M. Fernández-Mazuecos *et al.* 18MF10 (MA); Almería, San Juan de los Terreros, playa de la entrevista, 13-IV-1993, G. Aragón & I. Martínez GA 0070 (MA); Almería, Tabernas, Los Retamares, 21-III-2012, J. Calvo *et al.* (MA); Almería, Tabernas, 17-III-1984, G. Mateo (MA); Almería, Cuevas de Almanzora, Pozo del Esparto, 27-III-1998, A. Carrillo *et al.* CN 1835 (MA); Almería, Tabernas, 19-III-1984, G. Mateo & R. Lázaro (MA); Almería, Tabernas, cerca de la carretera a Sorbas, 14-III-1999, M.B. Crespo *et al.* (MA); Almería, entre Venta de los Yesos y Tabernas, 20-V-1976, B. Cabezudo *et al.* (MA).

L. onubensis

Spain: Huelva, Fuente de la Corcha, 27-IV-2010, M. Fernández-Mazuecos & A. Bañón 28MF10 (MA); Huelva, entre La Palma del Condado y Valverde del Camino, 20-VI-1978, S. Talavera & B. Valdés (MA); Huelva, Riotinto-Campofrío, 17-IV-1980, J. Rivera *et al.* (MA); entre Trigueros y Valverde, prov. de Huelva, 11-IV-1960, S. Rivas Goday *et al.* (MA); Valverde, Huelva, 13-V-1931, E. Gros (MA).

L. pedunculata

Portugal: Playa de Monte Gordo, 6-V-2010, M. Fernández-Mazuecos & J.L. Blanco-Pastor 61MF10 (MA); sand dunes, Armaceo de Pera, Algarve, 5-IV-1967, R.M. Wadsworth *et al.* (RNG).

Morocco: entre Rabat y Casablanca, Mohammedia, playa de Assanoubar, 16-IV-1984, Aparicio *et al.* (RNG); Chefchaouen, playa de Targha, 8-IV-1995, A.J. Caruz *et al.* (RNG); Tetuan, Oued-Laou, 14-III-1995, M.A. Mateos *et al.* (RNG); 14 km SE of Tetouan, Cap Mazari, 9-IV-1974, Miller, Russell & Sutton 846 (RNG); Restinga, Tetouan-Ceuta, 9-IV-1971, Davis 31102 (RNG); Tetouan, Larache, Ras Remel, 20-IV-1988, Silvestre *et al.* (RNG); Gharb – Chrarda – Béni Hassen, Moulay-Bousselham, 3-IV-2010, T. Buirra *et al.* JC4502 (MA); Tánger – Tétouan, Tleta-de-Oued-Laou, 7-IV-2009, J. Calvo & I. Espejo JC3460 (MA); c. 4 km NW of Oued Laou, 26-II-1994, S.L. Jury 13364 (MA); hab. in arenosis maritimis, pr. El Araix, 23-III-1930, Font Quer (MA); hab. in arenosis maritimis l. Rincón de Medik, inter Ceuta et Tetauen, 13-III-1930, Font Quer (MA).

Spain: Huelva, Lepe, urbanización Nueva Umbría, 5-V-1978, B. Cabezudo *et al.* (RNG); prope Gibraltar, Hispania, prov. Cádiz, Baetica, 23-V-1922, E. Gros (RNG); circa Cádiz, Hispania, prov. Cádiz, Baetica, 26-III-1925, E. Gros (RNG); Vejer de la Frontera, Los Caños de Meca, Cádiz, 27-IV-1978, T. Luque *et al.* (RNG); Cádiz, Cádiz Isthmus, 18-IV-1951, A.H.G. Alston (RNG); Cádiz, Zahara de los Atunes, 27-IV-1978, T. Luque *et al.* (RNG); Cádiz, entre Punta Palomas y Tarifa, 16-IV-1974, S. Talavera & B. Valdés (RNG); Almería, Roquetas de Mar, Punta El Sabinar, a 200 m del faro, 11-IV-1997, M.B. Crespo *et al.* (MA); Huelva, Marismas del Odiel, 17-III-2009, M. Fernández-Mazuecos *et al.* 3MF09 (MA); Málaga, Faro Calaburras, Mijas Costa, 17-IV-2009, M. Fernández-Mazuecos & J. Ramírez 27MF09 (MA); Almería, Cabo de Gata, playa de las Salinas, 21-IV-2009, M. Fernández-Mazuecos 30MF09 (MA); Huelva, Islantilla, 9-III-2004, E. Sánchez-Gullón (MA).

United Kingdom: Gibraltar, ladera E del Peñón, entre Catalan Bay y Dudley Ward Way, 17-5-1985, J. Bensusan *et al.* (MA).

L. pinifolia

Algeria: El Kala ex La Calle, bord de la route allant d'El Kala au Cap Rosa, près des rives ouest du Lac Melah, 7-VII-1979, A. Dubuis *et al.* (RNG); 7 km W of El Kala, La Calle, 11-V-1971, Davis 52172 (RNG); El Kala ex La Calle, bord de la route allant d'El Kala au Cap Rosa, près des rives ouest du Lac Melah, 7-VII-1979, A. Dubuis *et al.* (MA); in arenosis ditionis Senhadja prope lacum Anatum, 21-VI-1934, R. Maire (MPU).

L. pseudoviscosa

Tunisia: Kairouan, in camp. arenos., 15-V-1896, S. Murbeck (BM); Kairouan, in campis arenosis, 15-V-1896, S. Murbeck (LD); Kairouan, in campis arenosis, 15-V-1896, S. Murbeck (S); 6 km SW of El Haouaria on road to Soliman, Nabeul province, 2-V-1990, P. Wilkin & E.J. Wellens (RNG).

L. salzmanni

Spain: Málaga, El Chorro, Sierra de Almorchón, 17-IV-2009, M. Fernández-Mazuecos & J. Ramírez 19MF09 (MA).

L. spartea

Portugal: Praia da Adraga, 25-III-2009, M. Fernández-Mazuecos 13MF09 (MA); Montemor-o-Novo, 26-III-2009, M. Fernández-Mazuecos 18MF09 (MA); Alto Alentejo, Mora, a 7 km de Pavia, 18-IV-1987, A. Moura (MA); Sierra da Estrella, VI-1966, M. Gilbert (MA); Baixo Alentejo, Serpa-Pias, 12-IV-1949, F. Fontes & B. Rainha (MA); Alto Alentejo, Serra de Ossa, 1954, Malato-Beliz (MA); Alto Alentejo, Serra de S. Mamede, 12-VI-1959, M. Beliz & J.A. Guerra (MA); Alto Alentejo, Mourao, 21-III-2001, S. Castroviejo *et al.* SN329 (MA); Évora Monte, entre Estremoz y Évora, 28-V-1996, M.A. Carrasco *et al.* 13663SC (MA); próximo a Vilar Formoso, 17-VII-1983, E. Bayón *et al.* 8741 SC (MA); carretera de Alcobaça a Nazaré, 3 km antes de Nazaré, 23-IV-1978, P. Cubas *et al.* 057MG (MA); Estremadura, Faro, 13-VI-1961, M.-Béliz & J.A. Guerra (MA); Algarve, entre Aljezur e Odesseixe, 27-IV-1956, Malato Beliz *et al.* (MA); Baixo Alentejo, Península de Troia, 17-V-1973, Malato-Beliz & J.A. Guerra (MA).

Spain: Badajoz, Alburquerque, finca El Hito, 24-III-2009, M. Fernández-Mazuecos 10MF09 (MA); Huelva, Marismas del Odiel, La Cascajera, 17-III-2009, M. Fernández-Mazuecos *et al.* 5MF09 (MA); Toledo, Velada, camino hacia la ermita de la Virgen de Gracia, 15-IV-2008, M. Fernández-Mazuecos 3MF08 (MA); Huelva, El Romerano, 1-IV-2008, E. Sánchez-Gullón (MA); Salamanca, entre Calvarrasa

de Arriba y Arapiles, 5-V-2009, M. Fernández-Mazuecos & P. Vargas 40MF09 (MA); Zamora, Fonfría, Castro de Alcañices, 31-V-2010, B. Estébanez & N. Medina (MA); León, Villalís de la Valduerna, 2-VI-2010, B. Estébanez & N. Medina (MA); León, Alija del Infantado, 1-VI-2010, B. Estébanez & N. Medina (MA); Madrid, Colmenar Viejo, base del cerro de San Pedro, 24-VII-2007, P. Vargas 101PV07 (MA); Badajoz, Calamonte, non longe minis ab urbe Mérida, 9-II-1982, S. Castroviejo 6158 SC (MA); Cantabria, Páramo de la Lora, Valderredible, 2-IX-1983, E. Lorient (MA); Orense, Cudeiro, en los alrededores de la capital, 15-XI-1987, J. Amigo (MA); Pontevedra, 11-VI-1916, L. Crespi (MA); Castrelo de Miño, Orense, 17-VII-1935, A. Rodríguez (MA); Pontevedra, Tui, Caldelas de Tui, augas abaixo do balneario, 8-V-1996, X.R. García Martínez 6527 (MA); Jaén, Cambil, alto del Mercadillo, 21-V-1985, C. Fernández (MA); J. Andújar, Sierra Quintana, 23-VI-1985, C. Fernández & E. Cano (MA); Jaén, Andújar, pantano del Jádula, 4-V-1983, E. Postigo (MA); Huelva, Sanlúcar de Guadiana, El Romerano, 24-IV-2008, E. Sánchez-Gullón (MA); Huelva, Sierra de Aracena, entre Valdeflores e Higuera de la Sierra, arroyo del Rey, 24-II-1978, J. Rivera (MA); Córdoba, C-110, entre Villaviciosa y Córdoba, alto de la carretera en el km 15, 6-V-1988, E. Bayón *et al.* (MA); Sevilla, entre Puebla del Río y Venta del Cruce, 7-V-1988, E. Bayón *et al.* (MA); Jaén, Baños de la Encina, 21-V-1992, F. Gómez Manzaneque & C. Morla (MA); Badajoz, Cabeza del Buey, 5-III-2000, P. Escobar García (MA); Cáceres, Losar de la Vera, Valle del Tiétar, Vega del Cincho, 20-III-1980, Meana *et al.* (MA); Badajoz, Campanario, VI-1911, V. Lagares (MA); Cáceres, Talayuela, 8-VI-1975, E. Valdés-Bermejo (MA); Cáceres, orilla del río Salor, pr. Aliseda, 2-V-1988, Aedo CA 4459 (MA); Cáceres, Garganta de la Olla, 3-VI-1993, G. Aragón *et al.* (MA); Badajoz, Santa Amalia, río Gúdalo, 20-III-2001, J.J. Aldasoro 1208 (MA); Cáceres, Valencia de Alcántara, Majadallana, 8-IV-2004, M. De la Estrella 9 (MA); Badajoz, pr. Olivenza, 22-III-2001, C. Aedo *et al.* CA 6062 (MA); Baños de Montemayor, Cáceres, VII-1904, C. Escribano (MA); Quintana de la Serena, Badajoz, 11-V-1971, B. Casaseca (MA); Badajoz, Campanario, IV-1971, Fernández-Casas (MA); Soria, el Royo, a orillas del río Zazón, 16-VIII-1983, J. Molero & A. Rovira (MA); Cueto del Moro, León, 1944, Rojas (MA); León, El Bierzo, prope Ponferrada, 17-V-1933, W. Rothmaler (MA); Gordaliza del Pino, León, 10-VI-1990, P. Montserrat (MA); Burgos, Carazo, camino de la ermita de la Virgen del Sol, 12-VII-1979, Pons-Sorolla & Susanna (MA); Burgos, Covarrubias, Cerezuelos, 24-V-1998, M. Rodrigo Juarros (MA); Burgos, Covarrubias, frente a la granja Degesa, 7-VI-1998, M. Rodrigo Juarros (MA); Zamora, Tábara, Regato del Correo, 25-V-1996, P. Bariego Hernández (MA); Valladolid, 22-VI-1906, F. Sennen (MA); Castellanos de Villiquera, Salamanca, 7-VI-1967, B. Casaseca (MA); carretera de Salamanca, La Alberca, Salamanca, 23-VI-1946, A. Caballero (MA); Ávila, Valle de Amblés, La Torre, 15-V-1976, Fuertes & Laredo (MA); Ávila, Castronuevo, 19-VI-1984, Barrera *et al.* (MA); Ávila, Ramacastañas, 30-IV-1987, Luceño & Vargas PV2025bis (MA); Segovia, Revenga, 11-VI-1988, R. García Adá 5037 RG (MA); Segovia, Pedraza, de Pedraza a Matabuena, 6-VI-1987, R. García Adá (MA); Segovia, Aguilafuente, 18-VI-1988, R. García & G. López 5200 RG (MA); Segovia, La Granja de San Ildefonso, de Pradera de Navalhorno a La Granja, 14-VI-1985, R. García 777 RG (MA); Segovia, Laguna de la Tenca, Lastras de Cuéllar, 10-IX-1989, C.J. Martín CJM 203 (MA); Cuenca, La Mota del Cuervo, desvío a San Clemente, 10-V-1978, G. López 516 GF (MA); Ciudad Real, Villamayor de Calatrava, volcán del Morrón de Villamayor, 14-V-2000, M. Bellet & C. Santamaría (MA); Albacete, Villarrobledo, entre Villarrobledo y El Provencio, 3-V-2008, A. Buira & J. Calvo JC2182 (MA); Guadalajara, La Fuensaviñán, Navazo del Pozo, 24-VI-1982, J. Baranda *et al.* 6266 SC (MA); Valdeñuño, prov. Guadalajara, 30-XII-1992, P. Garin (MA); Madrid, Valle del Paular, 10-VI-1977, Gutiérrez Bustillo & M. Costa (MA); Madrid, San Agustín de Guadalix, 28-VI-1982, J.C. Moreno (MA); Madrid, Aldea del Fresno, 8-VI-1984, Carrasco *et al.* (MA); Madrid, Fuente del Fresno, 12-III-1977, M. Pastrana 434SC (MA); Madrid, Torrelaguna, 10-XI-1972, E. Valdés Bermejo (MA); Madrid, El Pardo, 6-V-1934, J. Cuatrecasas (MA); Madrid, Móstoles, Rancho Grande, 5-II-1958, E. Guinea (MA); Madrid, Dehesa de Arganda, 30-IV-1966, Bellot & Monasterio (MA); Ávila, El Barraco, Las Zauderas, 28-IV-2004, B. García Muñoz & I. Sánchez Tejedor (MA); Cáceres, Malpartida de Plasencia, 5-V-1983, E. Bayón *et al.* (MA).

L. tenuis

Libya: Tripoli, nr. University of Libya, 12-III-1970, Davis 49462 (RNG).

Tunisia: gobernación de Gabès, Matmata, pr. M'Dou, 23-III-2009, C. Aedo *et al.* CA16263 (MA); El-Djem, III-1909, C.J. Pitard (MA).

L. tingitana

Algeria: 55 km E of Mostagenem, E of Sidi Lakhdar, 14-IV-1976, D.A. & S.J. Sutton 173 (RNG); 25 km W of Mostaganem, La Macta, 15-IV-1976, D.A. & S.J. Sutton 208 (RNG); 25 km W of Mostaganem, 2 km SE of El Macta, 18-IV-1976, D.A. & S.J. Sutton 383 (RNG); La Macta, pres Mostaganem, 9-IV-1933, A. Faure (MA); Mazagran, les Sablette, à environ 6 km au SW de Mostaganem, 27-VI-1985, A. Dubuis (MA).

L. viscosa subsp. spicata

Spain: Málaga, Canillas de Albaida, 7-V-2008, M. Fernández-Mazuecos *et al.* 10MF08 (MA); Granada, Sierra Nevada, Peñones de San Francisco, 14-VII-2010g, J.L. Blanco-Pastor 147JB10 (MA); Jaén, Villanueva de Arzobispo, carretera hacia El Tranco, 25-V-2009, M. Fernández-Mazuecos 45MF09 (MA); Jaén, Cazorla, Puente de las Herrerías, 25-V-2009, M. Fernández-Mazuecos 49MF09 (MA); Málaga, Canillas del Aceituno, pista hacia Sierra Tejeda, 19-IV-2009, M. Fernández-Mazuecos & J.L. Blanco-Pastor 28MF09 (MA); Málaga, Sierra Tejeda, Barranco Roque, 24-IV-1987, S. Castroviejo 10003SC (MA); Jaén, Villanueva del Arzobispo, Sierra de las Villas, 3-V-1985, C. Soriano (MA); Málaga, Sierra Almijara, Nerja, carril Fuente del Esparto, 23-IV-2009, J. Ramírez (MA); Central de Diechar, 22-VI-1922, collector unknown (MA); Málaga, Sedella, Sierra de Almijara, 14-VI-1994, A. Aparicio *et al.* 7351 MV (MA); Albacete, San Juan de Alcaraz, 5-VII-1891, Porta & Rigo (MA); El Gallinero, pr. Riópar, reg. Murc., 12-VII-1923, Cuatrecasas (MA); Granada, Sierra de Alfacar, Alfaguarilla, 18-VI-1979, Pérez Raya & Molero Mesa (MA); Jaén, Jamilena, 14-V-1982, C. Fernández (MA); Granada, Puerto de la Mora, cra. al Pozuelo, a 2.5 km de la general, 12-VI-1989, G. Nieto-Feliner 2724GN & A. Izuzquiza (MA); laderas arenosas y cunetas de la carretera pr. Pinos Prados, en la Sierra de Cázulas, Granada, 13-V-1990, A. Pallarés (MA); Málaga, Sierra Tejeda, subida desde El Alcázar, Alcauzín, 29-VI-1978, P. Cubas *et al.* (MA); Jaén, Pontones, barranco del arroyo de las Grajas, 9-V-1981, C. Soriano (MA); Jaén, Cazorla, falda del cerro de la Torquilla, 21-VI-1975, González Rebollar *et al.* (MA); Jaén, Cazorla, aledaños de la C.F. Fuente del Oso, 31-V-1976, González Rebollar *et al.* (MA); Jaén, Cazorla, aledaños de la C.F. Fuente del Oso, 19-VI-1975, González Rebollar *et al.* (MA); Jaén, Cazorla, aledaños de la C.F. Fuente del Oso, 31-V-1976, F. Muñoz Garmendia & C. Soriano (MA).

L. viscosa subsp. viscosa

Portugal: Baixo Alentejo, entre Grandola e Alcacer do Sal, 28-IV-1959, Malato-Beliz *et al.* (MA); Baixo Alentejo, entre Figueira de Cavaleiros e Sta. Margarida do Sado, 17-IV-1956, Malato-Beliz *et al.* (MA); Baixo Alentejo, Sines, 10-IV-1946, Bento Rainha (MA).

Spain: Huelva, Parador de Mazagón, 15-II-2006, E. Sánchez-Gullón (MA); Huelva, Matalascañas, 16-III-2009, M. Fernández-Mazuecos & J.L. Blanco 1MF09 (MA); Huelva, Lucena del Puerto, 27-III-2008, E. Sánchez-Gullón (MA); Huelva, Puerto de Santa María, 14-III-2009, J.L. Blanco-Pastor 11JLB09 (MA); Huelva, Enebrales de Punta Umbría, 17-IV-2006, E. Sánchez-Gullón (MA); Huelva, Las Palmeritas, Isla Cristina, 10-IV-2008, E. Sánchez-Gullón (MA); Huelva, Marismas del Odiel, El Almendral, 17-III-2009, M. Fernández-Mazuecos *et al.* 6MF09 (MA); Cádiz, NNW of Algeciras, between estación de Castellar and Malmorailla, 22-IV-1970, V.H. Heywood *et al.* 617 (RNG); Sevilla, road from Sevilla to Granada between el Arahal and Osuna, 9-IV-1972, D. Bramwell *et al.* (RNG); Sevilla, c. 10 mi. S of Sevilla, between Puebla del Río and Aznalcázar, 30-III-1969, V.H. Heywood *et al.* 385 (RNG); Cádiz, sandy meadow by beach between Hotel Cortijo de la Plata and Zahara de los Atunes, 12-IV-1970, C.R. Fraser-Jenkins (RNG); Cádiz, between Arcos de la Frontera and Bornos on C.342, 22-IV-1973, E.A. Leadlay *et al.* (RNG); Huelva, a 5 km de Ayamonte, 6-IV-1979, M.J. Díez *et al.* (RNG); Almonte, Matalascañas, prov. d'Huelva, 1-III-1977, B. Cabezudo (RNG); Huelva, c. 20 mi. S of La Palma, near El Rocío, 1-IV-1969, V.H. Heywood *et al.* 484 (RNG); Medina Sidonia, prov. Cadiz, Baetica, 18-IV-1925, E. Gros (RNG); Chiclana, Cádiz, 6-V-1967, J. Borja (RNG); Huelva, Villarrasa, junto autopista A-49, 13-IV-1996, Camuñas *et al.* (RNG); Cádiz, Alcalá de los Gazules, Peña del Amor, 13-V-1971, B. Cabezudo *et al.* 278/71 (RNG); Valencia, Carcaixent, 24-IV-1986, G. Mateo *et al.* (MA); Valencia, Carcagente, 24-IV-1986, G. Mateo & S. Piera (MA); Sevilla, Puebla del Río, cerca de la Isla Mayor, 17-III-1968, E.F. Galiano *et al.* (MA); Cádiz, carretera Arcos de la Frontera – Bornos, c. 1 km antes de Bornos, 8-5-1988, F.

Muñoz Garmendia & J. Pedrol 2897JP (MA); Cádiz, Algeciras, subiendo al puerto de la Higuera, 25-V-1988, A. Izuzguiza *et al.* 1357AI (MA); Cádiz, Benalup de Sidonia, 10-V-1972, A. González & G. López 1973 GF (MA); Huelva, Matalascañas, pr. Camping 'El Rocío Playa', 12-V-2006, A. Quintanar AQ1900 (MA); Huelva, Matalascañas, pr. Camping 'El Rocío Playa', 12-V-2006, A. Quintanar AQ1903 (MA); Huelva, pr. Almonte, 12-V-2006, A. Quintanar AQ1953 (MA); Huelva, Gibraleón, 17-III-1968, J. Borja (MA); Almonte, Doñana, 20-IV-1977, S. Castroviejo *et al.* 637 SC (MA); Cartaya, Huelva, 12-V-1942, C. Vicioso (MA); Sierra del Endrinal, prope Grazalema, prov. Cádiz, Baetica, 10-VII-1925, E. Gros (MA); Medina Sidonia, prov. Cádiz, Baetica, 18-IV-1925, E. Gros (MA); Málaga, entre Grazalema y Ronda, 23-V-1966, F. Getliffe *et al.* (MA); Sevilla, Coria del Río, 9-III-1968, E.F. Galiano & S. Silvestre (MA).

Appendix S2. Additional methods, results and discussion.

Materials and methods

Taxonomic treatment

Although the first modern synthesis of *Linaria* sect. *Versicolores* is due to Viano (1978b; 1978a), here we broadly adopted the more inclusive taxonomic treatment of Sutton (1988), except for some modifications as follows (Table 1). First, we accepted the recently described *L. imzica*, an endemic species from the Moroccan Anti-Atlas with distinct vegetative traits (broad leaves) (Gómez, 2004). We also recognized *L. gattefossei*, a Moroccan taxon treated as a synonym of *L. multicaulis* subsp. *heterophylla* by Viano (1978b) and Sutton (1988), but subsequently accepted by Fennane & Ibn Tattou (1998). The big leaves and conspicuous whole-plant glandular-pubesence clearly make it a distinct taxon. The Ibero-Moroccan *L. incarnata*, as treated by Sutton (1988), has been disintegrated in three taxa, based on a recent morphological and molecular analysis (B. Vigalondo *et al.*, in prep.): *L. incarnata* s.str., from Portugal and CW Spain; *L. onubensis*, from SW Spain; and *L. mamorensis*, from Morocco.

In contrast, we have not accepted several other recently described taxa which are poorly differentiated from those of Sutton's (1988) revision. Thus, new subspecific taxa of *L. multicaulis* (Dobignard, 1997; De Leonardis *et al.*, 1999; De Leonardis *et al.*, 2003; Hamdi *et al.*, 2009) have been considered to be referable to those previously described. *L. iranica* was treated as a synonym of the widespread *L. tenuis*. Regarding the Greek species *L. hellenica*, assigned to *L. tenuis* by Tan & Iatrou (2001), we have kept it on the basis of its distinct phylogenetic position as inferred by plastid DNA sequences (Fernández-Mazuecos and Vargas, 2011). Finally, we excluded the Portuguese *L. viscosa* subsp. *crassifolia* (Sutton, 1988) because it was not accepted in the last taxonomic revision of Iberian *Linaria* (Sáez and Bernal, 2009).

Gene tree estimation

Separate phylogenetic analyses were conducted on the ITS and ptDNA matrices using three methods: Bayesian inference (BI), maximum likelihood (ML) and maximum parsimony (MP). Based on previous phylogenetic evidence (Vargas et al., 2004), *Chaenorhinum* was used as the outgroup sequence in all analyses. BI was performed in MrBayes v3.1.2 (Ronquist and Huelsenbeck, 2003) through the CIPRES Science Gateway (Miller et al., 2010). We ran two searches with 10 million generations each and a sample frequency of 1000. Models of nucleotide substitution (Table 2) were selected for each DNA region under the Akaike Information Criterion (AIC) in jModelTest 0.1.1 (Guindon and Gascuel, 2003; Posada, 2008). In the ptDNA analysis, DNA regions were partitioned, and substitution models were unlinked across partitions. Fifty-percent majority rule consensus trees with Bayesian posterior probabilities (PP) of clades were calculated after removing the first 10% generations as burn-in. ML analyses were conducted in RaxML (Stamatakis, 2006) under the GTR+G model, with 1000 non-parametric rapid bootstrap replicates. MP analyses were performed in TNT 1.1 (Goloboff et al., 2003), using a “traditional search” with 10,000 replicates saving two most parsimonious trees per replicate, followed by a second heuristic search retaining all best trees and using the trees obtained in the previous 10,000 replicates as the starting ones. Bootstrap support (MP-BS) of clades was assessed using 10,000 standard replicates. Significant incongruence between loci prevented us from concatenating the ITS and ptDNA sequences for a total-evidence analysis (Kubatko and Degnan, 2007; Edwards, 2009). Instead, we implemented a species tree estimation analysis (see below).

Diversification rate variation

In addition to BiSSE analyses, we also estimated net diversification rates for the two major sister groups of sect. *Versicolores* (subsect. *Elegantes* and subsect. *Versicolores*, see below) using Magallón and Sanderson’s whole-clade method (Magallón and Sanderson, 2001), as implemented in the R package *geiger* (Harmon et al., 2008). Given that each subsection predominantly displays a different morphological type (Type III for the two species of subsect. *Elegantes* and Type I for 22 out of 28 taxa of

subsect. *Versicolores*), comparison of diversification rates was considered useful to further explore the effect of flower morphology on diversification rates. For each subsection, we calculated diversification rates using both crown and stem ages from the *BEAST analysis, and species richness using two different approaches, one synthetic and one analytical, in order to account for uncertainty in species boundaries. In the synthetic approach, we followed the taxonomic treatment shown in Table 1, which includes 23 species of subsect. *Versicolores*. In the analytical approach, subspecies of Table 1 were considered as distinct species, thus making 28 species of subsect. *Versicolores*. The latter approach was based on the fact that intra-specific taxa were usually not closely related in phylogenetic analyses (see below). Following Valente *et al.* (2010), we calculated diversification rates at two extremes of the relative extinction rate ($\varepsilon = 0$, no extinction; and $\varepsilon = 0.9$, high rate of extinction; where $\varepsilon = \text{extinction rate/speciation rate}$), and at the two extremes of the 95% highest posterior density intervals of crown and stem ages.

Finally, we conducted relative cladogenesis tests (Nee *et al.*, 1992; Nee *et al.*, 1994; Purvis *et al.*, 1995) as implemented in *geiger* on a random sample of 100 species trees from the posterior distribution of the *BEAST analysis. This test examines the distribution of numbers of descendents for each branch in the phylogenetic tree existing at some specified time. Under a model with homogeneous rates of cladogenesis, the number of descendents should follow a known distribution. Therefore, lineages with more, or fewer, descendents than expected under this distribution may be hypothesized as exceptionally successful or unsuccessful (Harmon *et al.*, 2008).

Results

Diversification rate variation

Net diversification rate of subsect. *Versicolores* was estimated to be higher than that of subsect. *Elegantes*. This result was robust to different extinction rate assumptions, taxonomical approaches and consideration of crown or stem ages (see table below). Relative cladogenesis tests recovered consistent results, with the subsect. *Versicolores* clade revealed as significantly more diversified when analyzing the MCC species tree and 89 of 100 randomly chosen trees.

Net diversification rates of subsections *Versicolores* and *Elegantes*. Estimates based on mean crown and stem ages obtained in the *BEAST analysis are shown, with intervals based on the extremes of the 95% highest posterior density intervals shown in brackets. ϵ , extinction rate as a fraction of speciation rate.

		Diversification rate (crown age, spp. Ma ⁻¹)		Diversification rate (stem age, spp. Ma ⁻¹)	
		$\epsilon=0$	$\epsilon=0.9$	$\epsilon=0$	$\epsilon=0.9$
Subsect. <i>Versicolores</i>	Synthetic taxonomy (23 species)	1.71 (1.09-3.52)	0.78 (0.50-1.60)	0.64 (0.43-1.14)	0.24 (0.16-0.42)
	Analytical taxonomy (28 species)	1.84 (1.18-3.81)	0.88 (0.56-1.81)	0.68 (0.46-1.21)	0.27 (0.18-0.48)
Subsect. <i>Elegantes</i> (2 species)		0 (0-0)	0 (0-0)	0.14 (0.09-0.25)	0.02 (0.01-0.03)

Discussion

Flower visitors of Linaria sect. Versicolores

The diverse visitors of *Linaria* sect. *Versicolores* (Table 10) contrast with the strong large-bee specialization found in larger personate flowers, such as those of *Antirrhinum* (Torres *et al.*, 2001; Vargas *et al.*, 2010), *L. vulgaris* (Stout *et al.*, 2000; Newman and Thomson, 2005) and several species of *Linaria* sect. *Supinae* (Sánchez-Lafuente, 2007; Sánchez-Lafuente *et al.*, 2011; J.L. Blanco-Pastor, unpublished results). Pollinator diversity was expected at least for two species of sect. *Versicolores* (*L. elegans* and *L. nigricans*) with evident open (not strictly personate) corollas (see Fig. 1P, Q). In addition, the relatively small size of *Versicolores* personate corollas (Sutton, 1988) seems to facilitate their opening by a wide range of pollinators, not only large bees, but also lighter and frailer insects, such as lepidopterans and some dipterans, which are less skilled, in principle, for opening the personate corolla (Table 10). Nevertheless, the presence of pollinator-restrictive traits, such as narrow tubes and long spurs, maintains a specialist pollination system in sect. *Versicolores*, in opposition to another genus of Antirrhineae (*Pseudomisopates*) in which the presence of small, spurless, not fully occluded personate corollas has led to a semi-generalist pollination system (Amat *et al.*, 2011).

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Figure S1. Bayesian phylogenetic analysis of ITS haplotypes inferred by PHASE. The fifty-percent majority-rule consensus tree is shown. Numbers above branches are Bayesian posterior probabilities.

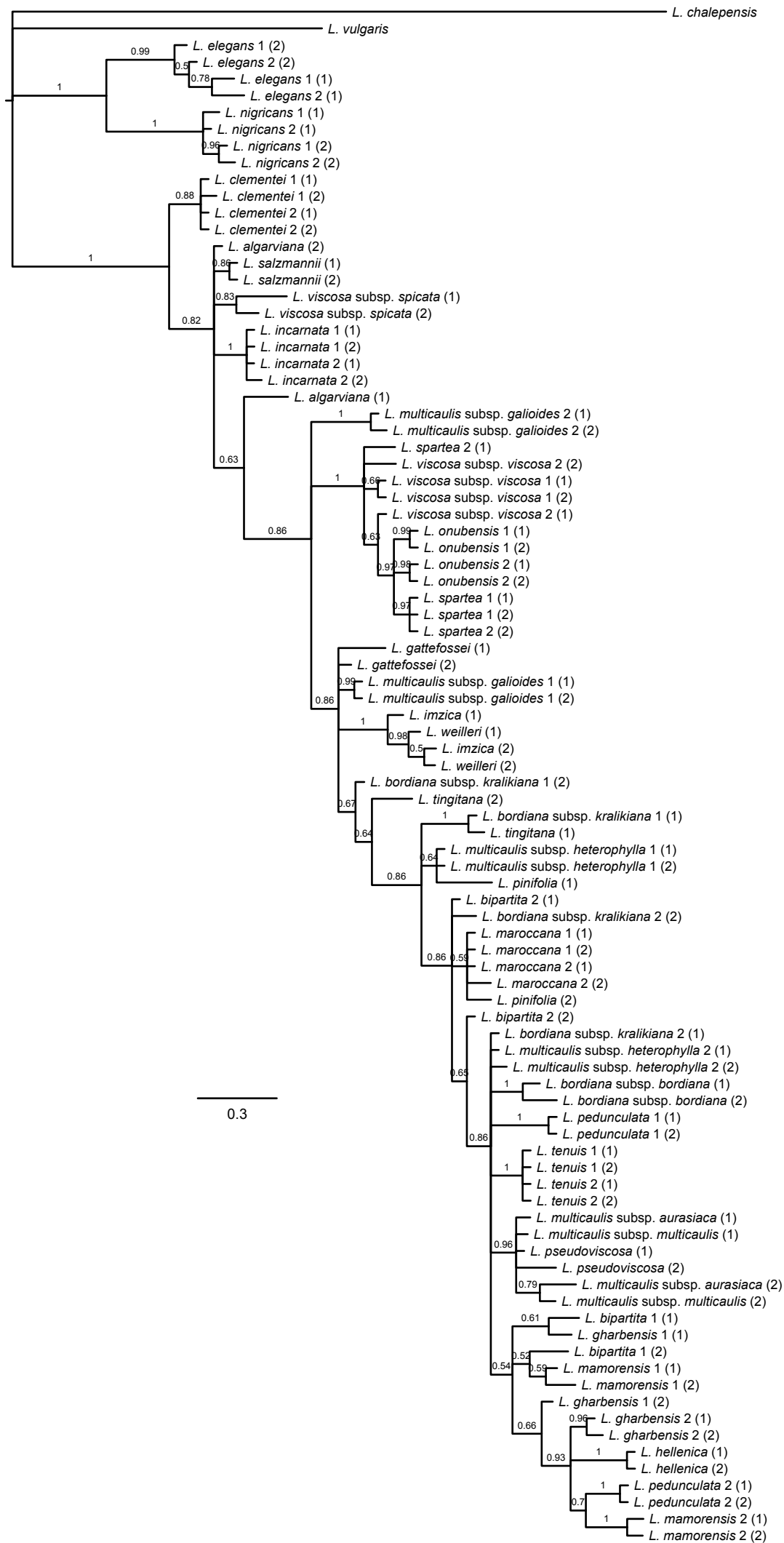
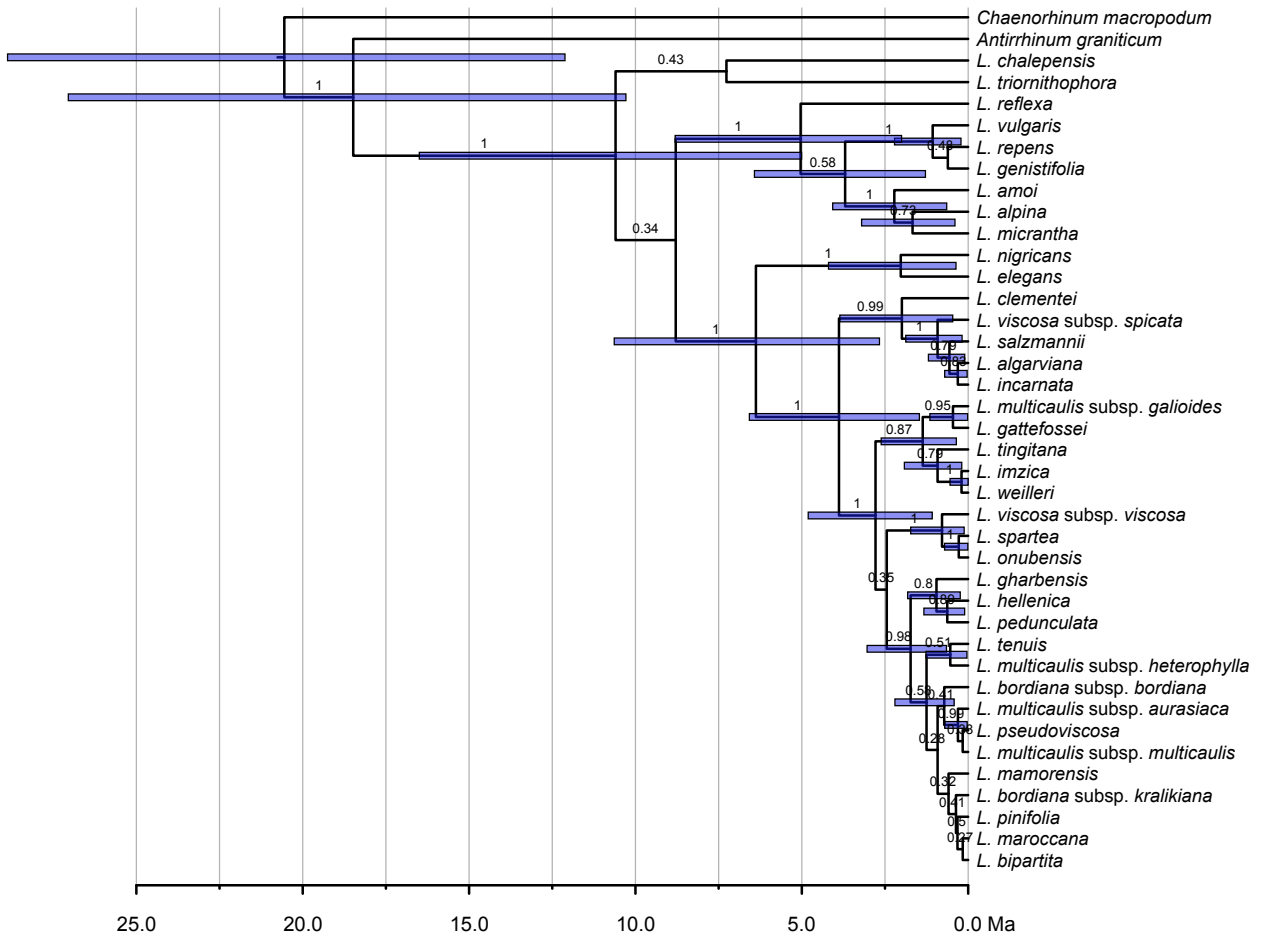


Figure S2. Maximum clade credibility trees produced by relaxed molecular-clock analyses of ITS (A) and ptDNA (B) sequences in BEAST. Sequences of one individual per taxon of *Linaria* sect. *Versicolores* were included. Node bars represent the 95% highest posterior density intervals for the divergence time estimates of clades with posterior probabilities above 0.50. Values above branches indicate Bayesian posterior probabilities.

A. ITS



B. ptDNA

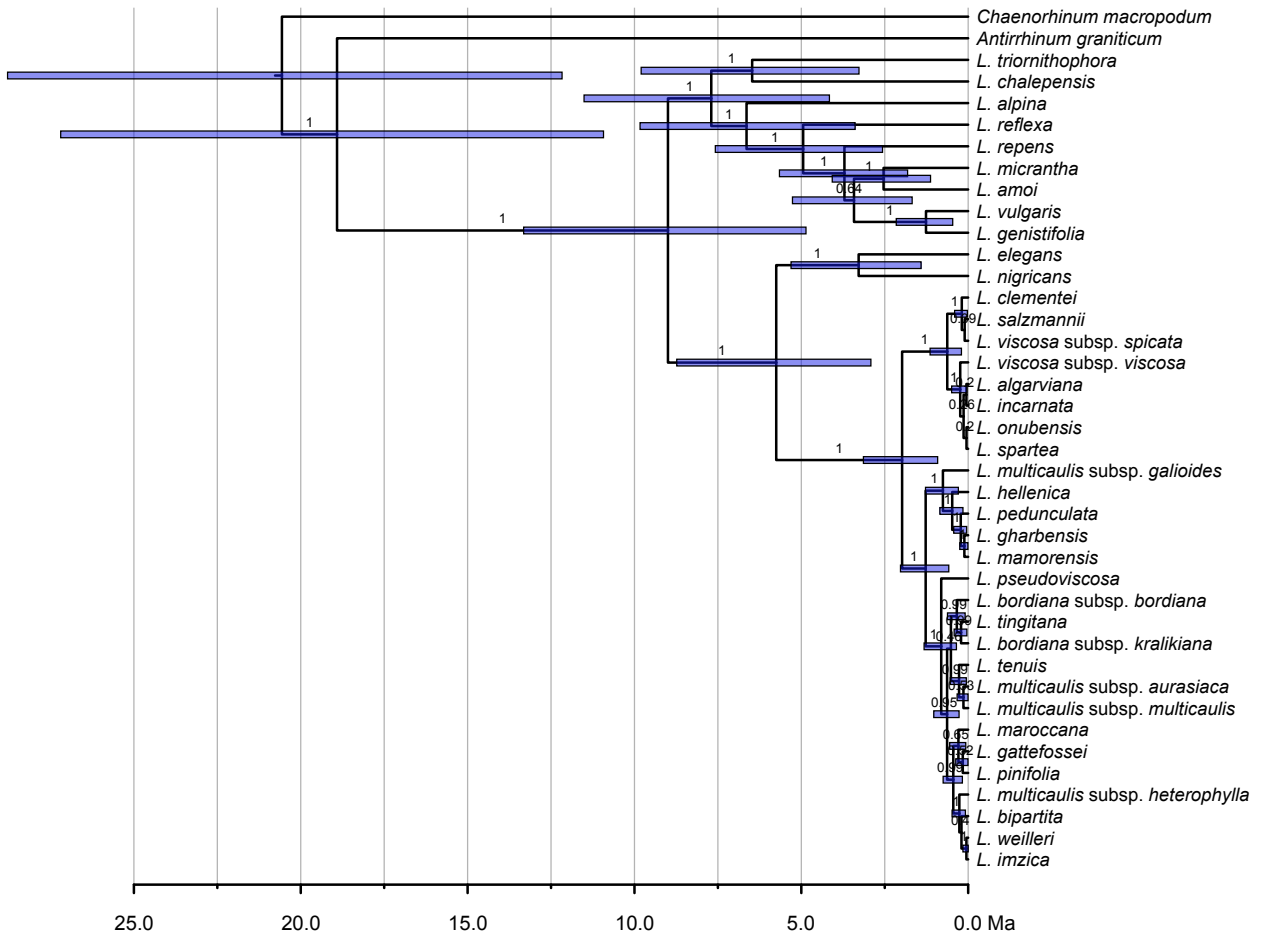


Figure S3. Scatter plot of tube width *versus* spur length measured from living specimens of the 12 Iberian species and subspecies of *Linaria* sect. *Versicolores*. The three major morphological types discussed in the text are indicated.

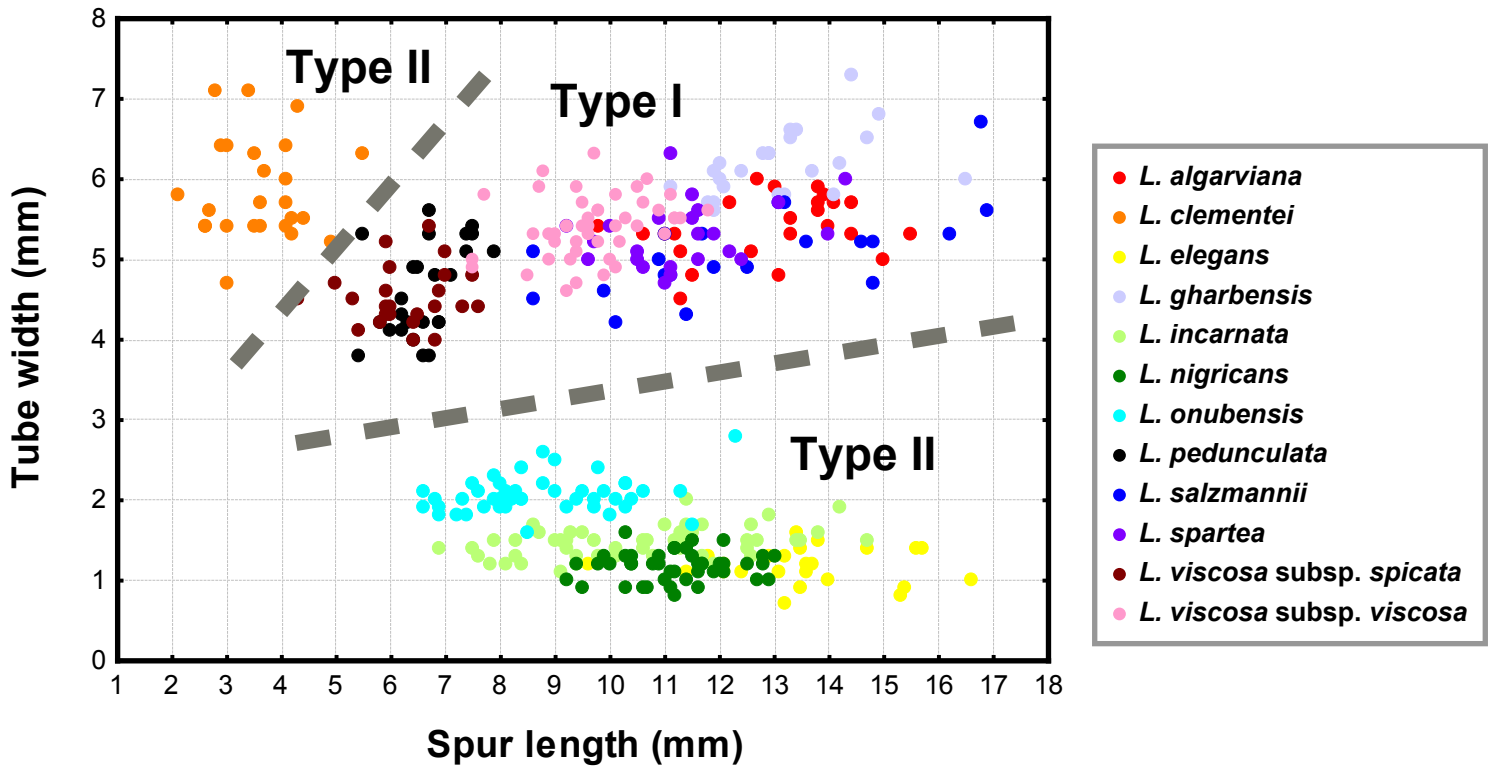


Figure S4. Visualization of landmark displacements along canonical variates 1 (A) and 2 (B) (see Fig. 6).

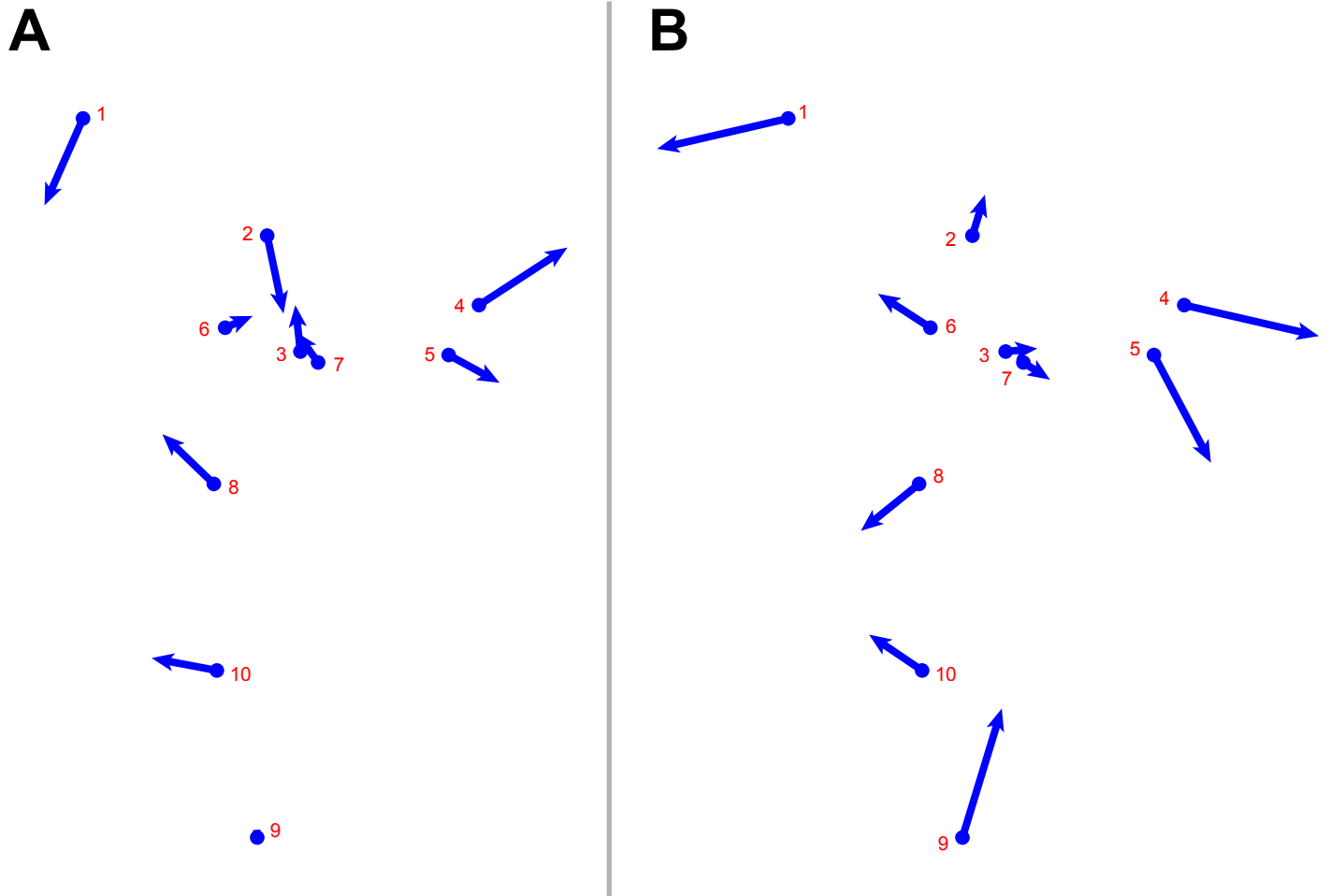
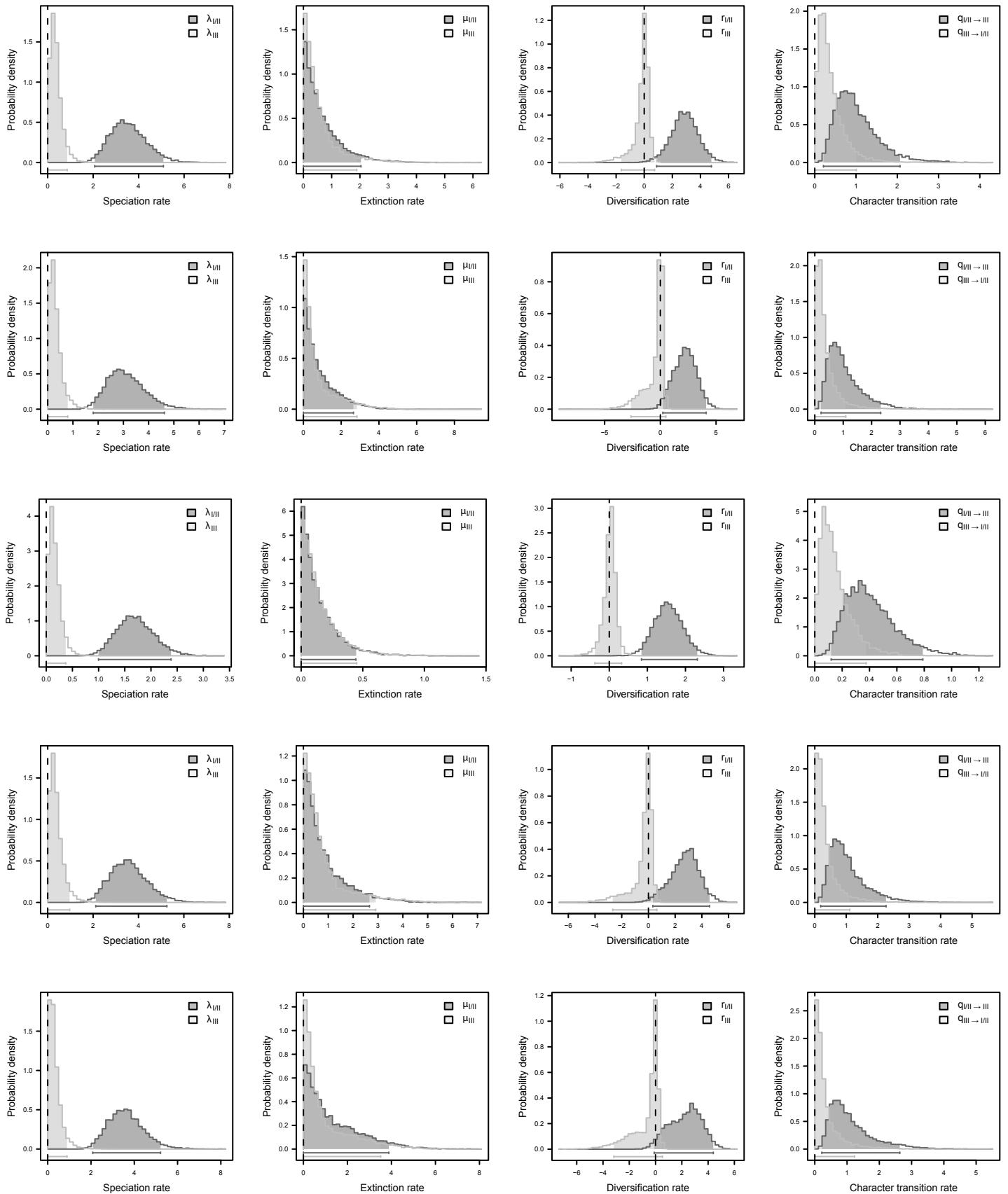


Figure S5. Results of the binary-state speciation and extinction (BiSSE) analysis of ten species trees randomly chosen from the posterior distribution of the *BEAST analysis. Two character states are considered, which correspond to morphological types I/II and III. Each row shows the posterior distributions of parameters obtained in the MCMC-BiSSE analysis of one tree. Horizontal bars indicate the 95% credibility interval for each parameter.



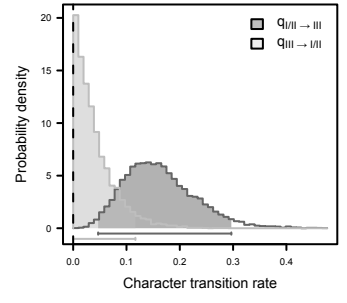
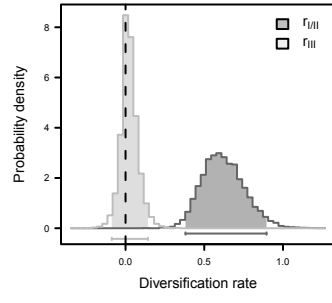
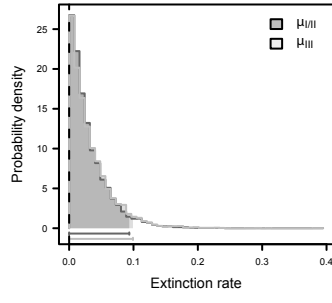
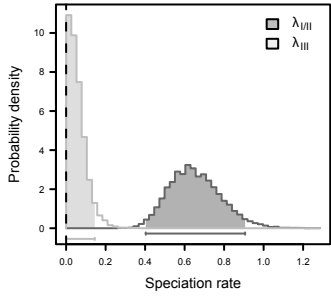
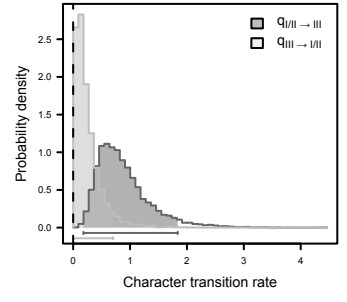
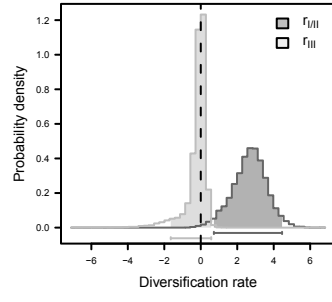
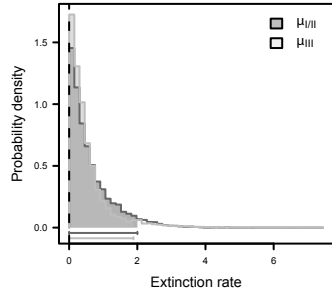
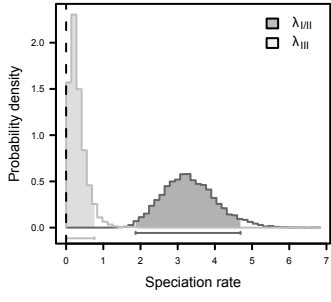
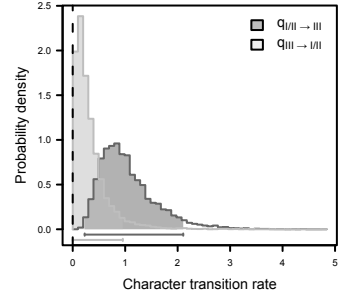
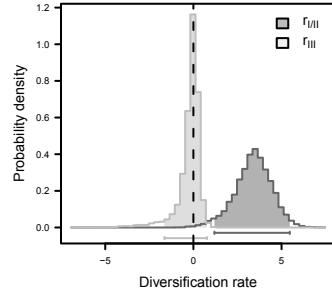
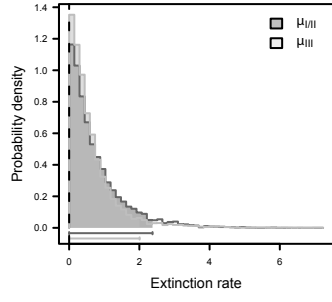
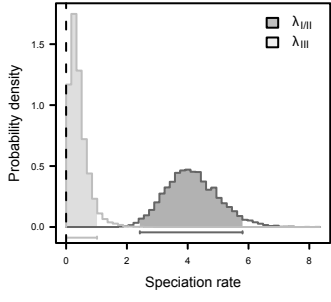
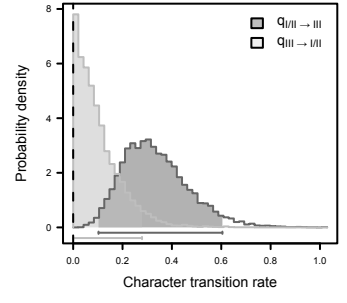
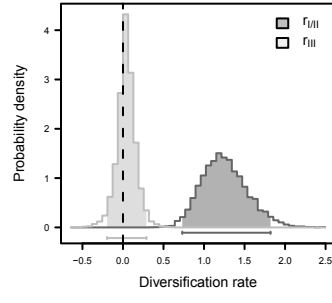
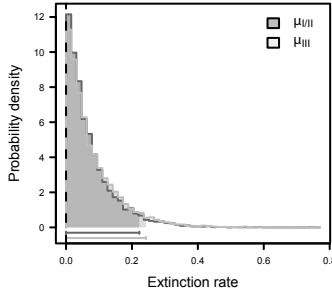
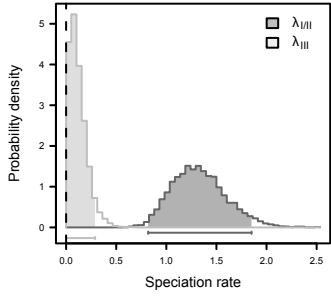
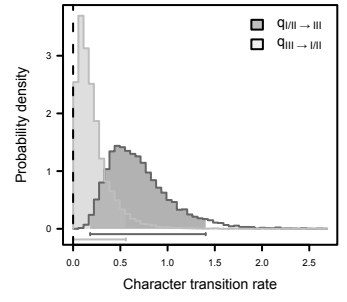
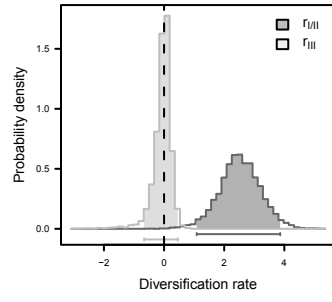
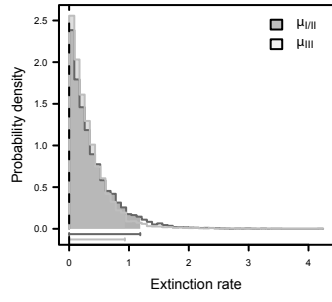
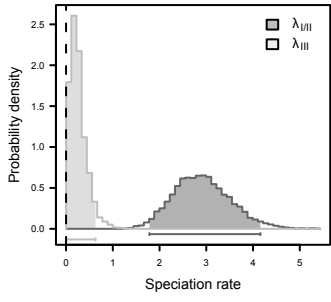


Figure S7. Summary of parsimony-based ancestral state reconstruction of the three major flower types of *Linaria* sect. *Versicolores*, conducted in Mesquite over the full posterior distribution of trees obtained in the *BEAST analysis. The MCC species tree (with nodes with posterior probability < 0.5 collapsed) is shown. Pie charts at nodes summarize the proportion of trees for which a given morphological type was reconstructed at that node.

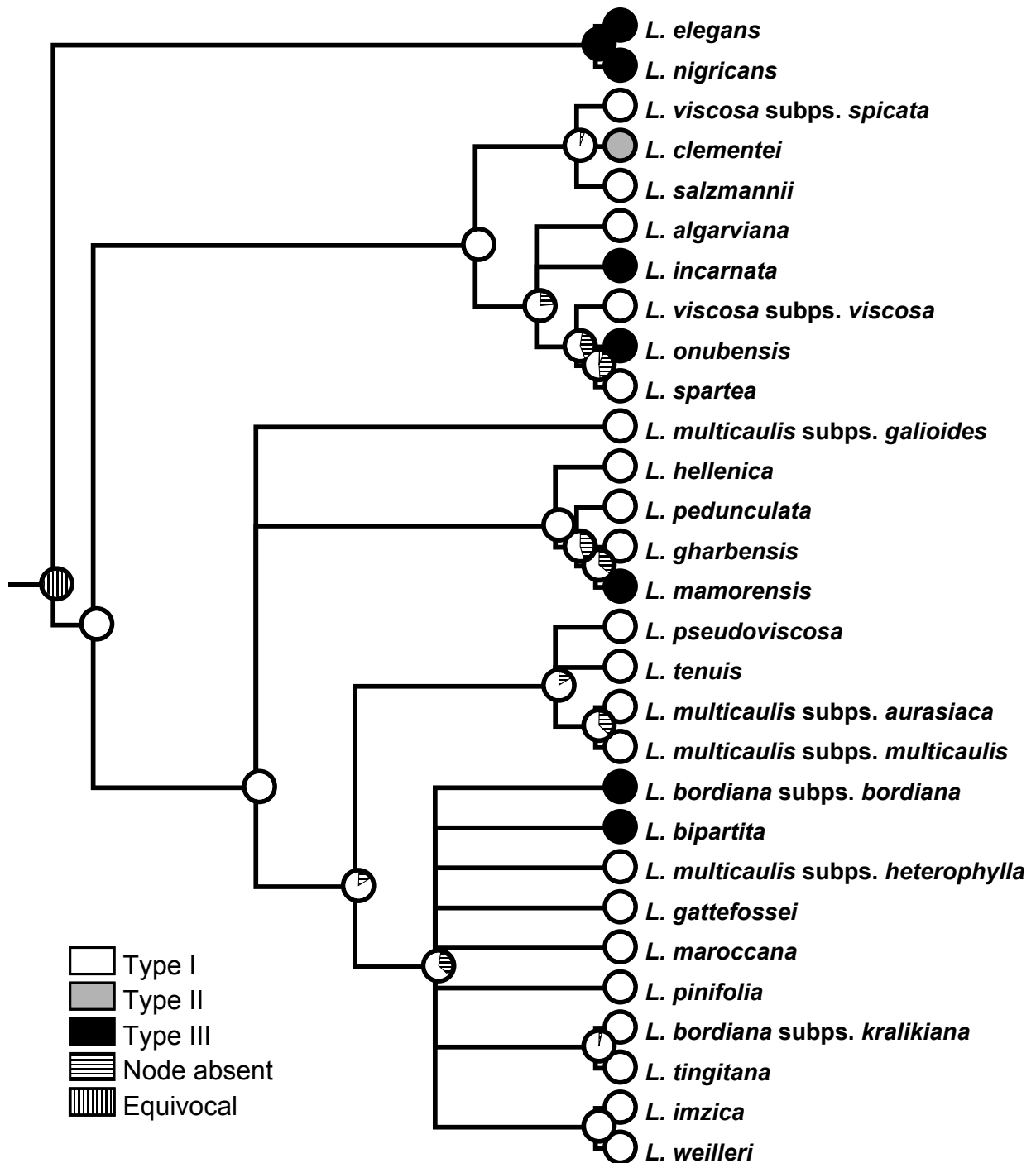


Table S1. Voucher specimens and GenBank accession numbers of species and subspecies of *Linaria* sect. *Versicolores* and the outgroup sampled for sequencing of nuclear (ITS) and plastid (*rpl32-trnL*^{UAG}, *trnK-matK*, *trnS-trnG*) DNA regions.

Taxon	Sampled locality	Voucher	ITS accession no.	<i>rpl32-trnL</i> ^{UAG} accession no.	<i>trnK-matK</i> accession no.	<i>trnS-trnG</i> accession no.
<i>Antirrhinum</i> L.						
<i>Antirrhinum graniticum</i> Rothm.	Spain, Cáceres, Trujillo	P. Vargas 213PV06 (MA)	JQ814484	JF694120	JF694188	JN663609
<i>Chaenorhinum</i> (DC.) Rchb.						
<i>Chaenorhinum macropodium</i> (Boiss. & Reut.) Lange	Spain, Málaga, Cómputa	P. Vargas 27PV08 (MA)	KC994565	JF694119	JF694187	KC994587
<i>Linaria</i> Mill.						
<i>Linaria</i> sect. <i>Diffusae</i> (Benth.) Wettst.						
<i>L. reflexa</i> (L.) Chaz.	Algeria, Algiers	J.J. Aldasoro A9799 (MA)	JX481126	JF694129	JF694197	KC994588
<i>Linaria</i> sect. <i>Linaria</i>						
<i>L. vulgaris</i> Mill.	France, Chamonix	B. Estébanez s.n. (MA)	JX481138	JF694126	JF694194	JQ814554
<i>Linaria</i> sect. <i>Macrocentrum</i> D.A.Sutton						
<i>L. chalepensis</i> (L.) Mill.	Cyprus, Larnaca, Cape Kiti	Iter Mediterraneum IV 294 (MA)	JX481081	JF694127	JF694195	JN663647
<i>Linaria</i> sect. <i>Pelisserianae</i> Valdés						
<i>L. triornithophora</i> (L.) Willd.	Spain, Cáceres, Puerto de Perales	M. Fernández-Mazuecos 18MF07 (MA)	JX481083	JF694128	JF694196	KC994589
<i>Linaria</i> sect. <i>Speciosae</i> (Benth.) Wettst.						
<i>L. genistifolia</i> (L.) Miller	Turkey, Hadim-Bezkir	J.J. Aldasoro y M.L. Alarcón A9751 (MA)	JX481137	JF694124	JF694192	JQ814542
<i>L. repens</i> (L.) Miller	Spain, Cuencia, Beteta	M. Fernández-Mazuecos 54MF09 (MA)	JX481144	JF694125	JF694193	KC994590
<i>Linaria</i> sect. <i>Supinae</i> (Bentham) Wettst.						
<i>L. alpina</i> (L.) Mill.	Spain, Huesca, Bujaruelo	J. Güemes s.n. (MA)	AY731243	JF694121	JF694189	KC994591
<i>L. amoi</i> Campo ex Amo	Spain, Málaga, Cómputa	M. Fernández-Mazuecos, A.D. Forrest & P. Vargas 30PV08 (MA)	KC994566	JF694122	JF694190	JN663626
<i>L. micrantha</i> (Cav.) Hoffmanns. & Link	Spain, Alicante, Vall de Gallinera	J.X. Soler & M. Signes 1530-JXS (MA)	AY731242	JF694123	JF694191	KC994592
<i>Linaria</i> sect. <i>Versicolores</i> (Benth.) Wettst.						
Subsect. <i>Versicolores</i>						
<i>L. algarviana</i> Chav.	Portugal, Cabo de São Vicente	M. Fernández-Mazuecos 11MF09 (MA)	JX481086	JF694130	JF694198	KC878770
<i>L. bipartita</i> (Vent.) Willd.	(1) Morocco, Rabat (2) Morocco, Tamri	S.L. Jury with R.G. Wilson 18558 (RNG) S.L. Jury, B. Tahmi & T.M. Upson 14293 (RNG)	JX481094 KC994567	JF694131 JF694132	JF694199 JF694200	KC878771 KC994593
<i>L. bordiana</i> Santa & Simonneau						
subsp. <i>bordiana</i>	Algeria, Kristel to Ain Franin	D.A. & S.J. Sutton 248 (RNG)	KC994568	KC994580	KC994583	KC994594
subsp. <i>kralikiana</i> (Maire) D.A.Sutton	(1) Algeria, Mostaganem – Tenes (2) Algeria, Sidi Lakhdar	Davis 51833 (RNG) D.A. & S.J. Sutton 172 (RNG)	KC994569 JX481095	JF694134 JF694133	JF694202 JF694201	KC994595 KC878772
<i>L. clementei</i> Haens.	(1) Spain, Málaga, Alhaurín de la Torre (2) Spain, Málaga, Coín	M. Fernández-Mazuecos, A.D. Forrest & P. Vargas 7MF08 (MA) M. Fernández-Mazuecos & J. Ramírez 24MF09 (MA)	JX481089 KC994570	JF694135 JF694136	JF694203 JF694204	KC878773 KC994596
<i>L. gattefossei</i> Maire & Weiller	Morocco, Beni Mellal, El Ksiba	A. Quintanar <i>et al.</i> AQ2025 (MA)	KC994571	KC994581	KC994584	KC994597
<i>L. gharbensis</i> Batt. & Pit.	(1) Morocco, Rabat (2) Spain, Huelva, Gibraleón	S.L. Jury & R.G. Wilson 18559 (RNG) M. Fernández-Mazuecos, J.L. Blanco & E. Sánchez-Gullón 7MF09 (MA)	KC994572 JX481100	JF694138 JF694139	JF694206 JF694207	KC994598 JN663658
<i>L. hellenica</i> Turrill	Greece, Kambos	Unknown collector (ATH)	JX481102	JF694140	JF694208	KC878774
<i>L. inciza</i> Gómiz	Morocco, Jbel Imzi	F. Gómiz s.n. (MA)	KC878736	JF694141	JF694209	KC878775
<i>L. incarnata</i> (Vent.) Spreng.	(1) Spain, Badajoz, Alburquerque (2) Spain, Salamanca, Pelabravo	M. Fernández-Mazuecos 9MF09 (MA) M. Fernández-Mazuecos & P. Vargas 39MF09 (MA)	KC878742 JX481088	JF694145 JF694146	JF694213 JF694214	JN663665 KC878782
<i>L. mamorensis</i> Mazuecos, Vigalondo & L.Sáez	(1) Morocco, Kenitra-Khemisset (2) Morocco, Salé	S. Martín-Bravo, I. Pulgar, F.J. Fernández, G.C. Mazo 34SMB06 (MA) J. Lambinon & G. van den Sande n°95/Ma/333 (RNG)	KC878745 KC878746	JF694142 JF694144	JF694210 JF694212	KC878784 KC878785
<i>L. maroccana</i> Hook.f.	(1) Morocco, Imouzzer Valley (2) Morocco, Marrakech – Tizi-n-Test	M. Ait Lafkih s.n. (RNG) S.L. Jury, B. Tahiri & T.M. Upson 14209 (RNG)	KC878752 JX481097	JF694148 JF694149	JF694216 JF694217	KC878791 KC994599
<i>L. multicaulis</i> (L.) Mill.						
subsp. <i>multicaulis</i>	Italy, Sicily, Etna	I. Álvarez <i>et al.</i> IA1622 (MA)	JX481098	JF694150	JF694218	KC994600
subsp. <i>aurasiaca</i> (Pomel) D.A.Sutton	Tunisia, El Kesra	Davis & Lamond 57154 (RNG)	KC994573	JF694151	JF694219	KC994601
subsp. <i>galioides</i> (Ball) D.A.Sutton	(1) Morocco, Oukaimedem (2) Morocco, Yagour	P. Jiménez Mejías, E. Narbona, A.J. Chaparro y M. Parra 200PJM05 (UPOS) A. Kool with H.J. Boer, P. Domínguez 904 (RNG)	KC994574 KC994575	JF694152 JF694153	JF694220 JF694221	KC994602 KC994603
subsp. <i>heterophylla</i> (Desf.) D.A.Sutton	(1) Morocco, Azrou (2) Morocco, Jbel Tazekka	M. Fernández-Mazuecos & J.C. Moreno 15MF08 (MA) E. Rico, S. Andrés & M. Santos SA-221 (SALA)	JQ814514 KC994576	JF694155 JF694157	JF694223 JF694225	KC878792 KC994604
<i>L. onubensis</i> Pau	(1) Spain, Huelva, Niebla (2) Spain, Huelva, Valverde del Camino	E. Sánchez-Gullón s.n. (MA) V. Valcarcel & P. Vargas 5PV08 (MA)	KC878751 KC878749	KC878769 JF694147	KC994585 JF694215	KC878790 KC878788
<i>L. pedunculata</i> (L.) Chaz.	(1) Spain, Almería, Cabo de Gata (2) Spain, Huelva, Marismas del Odiel	M. Fernández-Mazuecos 30MF09 (MA) M. Fernández-Mazuecos, J.L. Blanco & E. Sánchez-Gullón 4MF09 (MA)	KC994577 JX481101	JF694159 JF694161	JF694227 JF694229	KC994605 KC878793

<i>L. pinifolia</i> (Poir.) Thell.	Algeria, El Kala	A. Dubuis, H. Maurel & R. Rhamoun s.n. (RNG)	KC878753	JF694168	JF694236	KC878794
<i>L. pseudoviscosa</i> Murb.	Tunisia, El Haouaria	P. Wilkin & E.J. Wellens 231 (RNG)	JX481099	JF694169	JF694237	KC878795
<i>L. salzmanii</i> Boiss.	Spain, Málaga, El Chorro	M. Fernández-Mazuecos & J. Ramírez 19MF09 (MA)	JX481087	JF694170	JF694238	KC878796
<i>L. spartea</i> (L.) Chaz.	(1) Spain, Madrid, Colmenar	P. Vargas 101PV07 (MA)	JX481090	JF694171	JF694239	KC878797
	(2) Spain, Soria, Tardelcuende	M. Fernández-Mazuecos, A. Quiroga, S.C. Herrera & D. Orgaz 14MF07 (MA)	KC878754	JF694172	JF694240	KC878798
<i>L. tenuis</i> (Viv.) Spreng.	(1) Libya, Gebel Nefoussa	Davis 49632 (RNG)	KC994578	JF694173	JF694241	KC994606
	(2) Libya, Tripoli	Davis & Boulos 50581 (RNG)	JX481096	JF694174	JF694242	KC878799
<i>L. tingitana</i> Boiss. & Reut.	Algeria, El Macta	D.A. & S.J. Sutton 383 (RNG)	JX481092	JF694175	JF694243	KC878800
<i>L. viscosa</i> (L.) Chaz. subsp. <i>viscosa</i>	(1) Spain, Huelva, Marismas del Odiel	M. Fernández-Mazuecos, J.L. Blanco & E. Sánchez-Gullón 6MF09 (MA)	JX481091	JF694178	JF694246	KC878801
	(2) Spain, Huelva, Matalascañas	M. Fernández-Mazuecos & J.L. Blanco 1MF09 (MA)	KC878755	JF694179	JF694247	KC878802
subsp. <i>spicata</i> (Kunze) D.A.Sutton	Spain, Málaga, Canillas del Aceituno	M. Fernández-Mazuecos & J.L. Blanco 28MF09 (MA)	KC994579	KC994582	KC994586	KC994607
<i>L. weilleri</i> Emb. & Maire	Morocco, Tírhmi	Miller, Russell & Sutton s.n. (RNG)	JX481093	JF694182	JF694250	KC878805
Subsect. <i>Elegantes</i> (Viano) D.A.Sutton						
<i>L. elegans</i> Cav.	(1) Spain, Madrid, Puerto de Canencia	M. Fernández-Mazuecos 30MF08 (MA)	KC520995	KC521079	KC521197	KC521317
	(2) Spain, Orense, San Xoán de Río	M. Fernández-Mazuecos 45MF08 (MA)	KC520990	JF694184	JF694252	KC521327
<i>L. nigricans</i> Lange	(1) Spain, Almería, Cabo de Gata	M. Fernández-Mazuecos 29MF09 (MA)	KC520972	JF694185	JF694253	KC521232
	(2) Spain, Almería, Tabernas	P. Vargas 3PV08 (MA)	JX481104	JF694186	JF694254	KC521233

Table S2. Voucher specimens of Iberian species and subspecies of *Linaria* sect. *Versicolores* and the outgroup sampled for geometric morphometric analyses.

Taxon	Sampled locality	Voucher	No. individuals
<i>L. algarviana</i>	Portugal, Cabo de São Vicente	M. Fernández-Mazuecos 11MF09 (MA)	24
<i>L. clementei</i>	Spain, Málaga, Alhaurín de la Torre	M. Fernández-Mazuecos, A.D. Forrest & P. Vargas 7MF08 (MA)	21
<i>L. elegans</i>	Spain, Madrid, Puerto de Canencia	M. Fernández-Mazuecos 30MF08 (MA)	17
<i>L. elegans</i>	Spain, Portugal, Manteigas	M. Fernández-Mazuecos 127MF10 (MA)	7
<i>L. gharbensis</i>	Spain, Huelva, Gibraleón	M. Fernández-Mazuecos, J.L. Blanco & E. Sánchez-Gullón 7MF09 (MA)	23
<i>L. incarnata</i>	Spain, Badajoz, Alburquerque	M. Fernández-Mazuecos 9MF09 (MA)	24
<i>L. incarnata</i>	Spain, Salamanca, Pelabravo	M. Fernández-Mazuecos & P. Vargas 39MF09 (MA)	24
<i>L. nigricans</i>	Spain, Almería, Cabo de Gata	M. Fernández-Mazuecos 29MF09 (MA)	21
<i>L. nigricans</i>	Spain, Almería, Tabernas	P. Vargas 3PV08 (MA)	22
<i>L. onubensis</i>	Spain, Huelva, Fuente de la Corcha	M. Fernández-Mazuecos & A. Bañón 28MF10 (MA)	20
<i>L. onubensis</i>	Spain, Huelva, Valverde del Camino	V. Valcarcel & P. Vargas 5PV08 (MA)	25
<i>L. pedunculata</i>	Spain, Almería, Cabo de Gata	M. Fernández-Mazuecos 30MF09 (MA)	10
<i>L. pedunculata</i>	Spain, Huelva, Marismas del Odiel	M. Fernández-Mazuecos, J.L. Blanco & E. Sánchez-Gullón 4MF09 (MA)	17
<i>L. salzmannii</i>	Spain, Málaga, El Chorro	M. Fernández-Mazuecos & J. Ramírez 19MF09 (MA)	20
<i>L. sparteae</i>	Spain, Badajoz, Alburquerque	M. Fernández-Mazuecos 10MF09 (MA)	25
<i>L. viscosa</i> subsp. <i>spicata</i>	Spain, Málaga, Canillas del Aceituno	M. Fernández-Mazuecos & J.L. Blanco 28MF09 (MA)	24
<i>L. viscosa</i> subsp. <i>viscosa</i>	Spain, Huelva, Marismas del Odiel	M. Fernández-Mazuecos, J.L. Blanco & E. Sánchez-Gullón 6MF09 (MA)	22
<i>L. viscosa</i> subsp. <i>viscosa</i>	Spain, Huelva, Matalascañas	M. Fernández-Mazuecos & J.L. Blanco 1MF09 (MA)	23

Table S3. Measures of spur length and tube width obtained from herbarium specimens of the 30 species and subspecies of *Linaria* sect. *Versicolores*. Values are shown as means \pm standard deviations. Morphological type for each taxon (as discussed in the text) is indicated.

Taxon	Spur length (mm)	Tube width (mm)	Morphological type
Subsect. <i>Versicolores</i>			
<i>L. algarviana</i>	12.66 \pm 0.72	5.13 \pm 0.87	I
<i>L. bipartita</i>	10.09 \pm 1.48	2.16 \pm 0.33	III
<i>L. bordiana</i> subsp. <i>bordiana</i>	7.48 \pm 0.77	2.04 \pm 0.26	III
<i>L. bordiana</i> subsp. <i>kralikiana</i>	8.62 \pm 2.35	3.94 \pm 0.27	I
<i>L. clementei</i>	3.20 \pm 0.81	5.03 \pm 0.92	II
<i>L. dissita</i>	5.05 \pm 0.24	2.56 \pm 0.15	I
<i>L. gattefossei</i>	6.68 \pm 0.74	4.32 \pm 0.59	I
<i>L. gharbensis</i>	12.24 \pm 1.60	5.32 \pm 0.76	I
<i>L. hellenica</i>	5.48 \pm 0.01	3.24 \pm 0.64	I
<i>L. imzica</i>	10.24 \pm 1.66	5.30 \pm 0.36	I
<i>L. incarnata</i>	9.62 \pm 1.39	1.67 \pm 0.35	III
<i>L. mamorensis</i>	10.16 \pm 1.17	1.93 \pm 0.42	III
<i>L. maroccana</i>	12.87 \pm 2.49	4.59 \pm 0.91	I
<i>L. multicaulis</i> subsp. <i>aurasiaca</i>	8.42 \pm 1.33	4.39 \pm 0.47	I
<i>L. multicaulis</i> subsp. <i>galioides</i>	6.76 \pm 1.04	3.91 \pm 0.49	I
<i>L. multicaulis</i> subsp. <i>heterophylla</i>	8.58 \pm 2.15	4.25 \pm 0.72	I
<i>L. multicaulis</i> subsp. <i>multicaulis</i>	10.00 \pm 3.47	5.49 \pm 1.39	I
<i>L. onubensis</i>	6.78 \pm 1.17	1.97 \pm 0.22	III
<i>L. pedunculata</i>	6.02 \pm 1.07	4.46 \pm 0.85	I
<i>L. pinifolia</i>	5.25 \pm 0.65	3.60 \pm 0.62	I
<i>L. pseudoviscosa</i>	11.96 \pm 1.07	6.61 \pm 0.88	I
<i>L. salzmännii</i>	13.47 \pm 1.10	5.40 \pm 0.61	I
<i>L. spartea</i>	9.41 \pm 1.96	5.04 \pm 0.85	I
<i>L. tenuis</i>	5.53 \pm 1.09	2.80	I
<i>L. tingitana</i>	9.87 \pm 1.80	5.32 \pm 0.69	I
<i>L. viscosa</i> subsp. <i>spicata</i>	7.52 \pm 1.24	4.81 \pm 0.74	I
<i>L. viscosa</i> subsp. <i>viscosa</i>	9.30 \pm 1.26	5.35 \pm 0.93	I
<i>L. weilleri</i>	9.28 \pm 1.41	4.45 \pm 1.17	I
Subsect. <i>Elegantes</i>			
<i>L. elegans</i>	12.44 \pm 2.53	1.64 \pm 0.31	III
<i>L. nigricans</i>	10.39 \pm 1.23	1.61 \pm 0.30	III