

## Notulae to the Italian alien vascular flora: 12

Gabriele Galasso<sup>1</sup>, Giannantonio Domina<sup>2</sup>, Claudia Angiolini<sup>3</sup>,  
Gianluigi Bacchetta<sup>4</sup>, Enrico Banfi<sup>1</sup>, Davide Barberis<sup>5</sup>, Serlapo Bardi<sup>6</sup>,  
Fabrizio Bartolucci<sup>7</sup>, Gianmaria Bonari<sup>8</sup>, Maurizio Bovio<sup>9</sup>, Ian Briozzo<sup>10</sup>,  
Giuseppe Brundu<sup>11</sup>, Sergio Buono<sup>12</sup>, Giacomo Calvia<sup>4</sup>, Laura Celesti-Grapow<sup>13</sup>,  
Alessia Cozzolino<sup>14</sup>, Alba Cuena-Lombrana<sup>4</sup>, Michele Curuzzi<sup>15</sup>,  
Francesco S. D'Amico<sup>16</sup>, Davide Dagnino<sup>10</sup>, Giuseppe De Fine<sup>17</sup>,  
Emanuele Fanfarillo<sup>3</sup>, Alessandro Federici<sup>18</sup>, Paolo Ferraris<sup>19</sup>, David Fiacchini<sup>20</sup>,  
Tiberio Fiaschi<sup>3</sup>, Mauro Fois<sup>4</sup>, Leonardo Gubellini<sup>21</sup>, Emilio Guidotti<sup>22</sup>,  
Nicole Hofmann<sup>23</sup>, Elisabeth Kindermann<sup>8</sup>, Valentina L.A. Laface<sup>24</sup>,  
Andrea Lallai<sup>4</sup>, Pierangelo Lanfredini<sup>25</sup>, Lorenzo Lazzaro<sup>26</sup>, Valerio Lazzeri<sup>27</sup>,  
Michele Lonati<sup>5</sup>, Mara Loreti<sup>28</sup>, Vanessa Lozano<sup>11</sup>, Sara Magrini<sup>29</sup>,  
Andrea Mainetti<sup>5</sup>, Mariano Marchini<sup>30</sup>, Michela Marignani<sup>4</sup>, Marco Martignoni<sup>31</sup>,  
Giacomo Mei<sup>24</sup>, Francesco Minutillo<sup>32</sup>, Gian Paolo Mondino<sup>33</sup>, Riccardo Motti<sup>14</sup>,  
Carmelo M. Musarella<sup>24</sup>, Ginevra Nota<sup>5</sup>, Nicola Olivieri<sup>34</sup>, Mattia Pallanza<sup>35</sup>,  
Nicodemo G. Passalacqua<sup>36</sup>, Glauco Patera<sup>37</sup>, Nicola Pilon<sup>38</sup>, Lorenzo Pinzani<sup>39</sup>,  
Marco Pittarello<sup>5</sup>, Lina Podda<sup>4</sup>, Massimiliano Probo<sup>40</sup>, Simone Ravetto Enri<sup>5</sup>,  
Leonardo Rosati<sup>41</sup>, Piero Salerno<sup>42</sup>, Alberto Selvaggi<sup>43</sup>, Adriano Soldano<sup>44</sup>,  
Giovanna Sotgiu Cocco<sup>6</sup>, Giovanni Spampinato<sup>24</sup>, Adriano Stinca<sup>45</sup>,  
Massimo Terzi<sup>46</sup>, Giancarlo Tondi<sup>47</sup>, Claudia Turcato<sup>48</sup>,  
Camilla Wellstein<sup>8</sup>, Lorenzo Lastrucci<sup>49</sup>

**1** Sezione di Botanica, Museo di Storia Naturale di Milano, Corso Venezia 55, 20121 Milano, Italy **2** Dipartimento di Scienze Agrarie, Alimentari e Forestali (SAAF), Università di Palermo, Viale delle Scienze, edificio 4, 90128 Palermo, Italy **3** Dipartimento di Scienze della Vita, Università di Siena, Via P.A. Mattioli 4, 53100 Siena, Italy **4** Dipartimento di Scienze della Vita e dell'Ambiente, Università di Cagliari, Viale Sant'Ignazio da Laconi 13, 09123 Cagliari, Italy **5** Dipartimento di Scienze Agrarie, Forestali e Alimentari (DISAFA), Università di Torino, Largo P. Braccini 2, 10095 Grugliasco (Torino), Italy **6** Via V. Hugo 6, 09014 Carloforte (Sud Sardegna), Italy **7** Centro Ricerche Floristiche dell'Appennino (Università di Camerino - Parco Nazionale del Gran Sasso e Monti della Laga), San Colombo, 67021 Barisciano (L'Aquila), Italy **8** Facoltà di Scienze e Tecnologie, Libera Università di Bolzano, Piazza Università 5, 39100 Bolzano, Italy **9** Corso Saint-Martin de Corleans 151, 11100 Aosta, Italy **10** Dipartimento di Scienze della Terra, dell'Ambiente e della Vita (DISTAV), Università di Genova, Corso Europa 26, 16132 Genova, Italy **11** Dipartimento di Agraria, Università di Sassari, Viale Italia 39, 07100 Sassari, Italy **12** Via XXV Aprile 6, 01010 Oriolo Romano (Viterbo), Italy **13** Dipartimento di Biologia Ambientale, Sapienza Università di Roma, Piazzale A. Moro 5, 00185 Roma, Italy **14** Dipartimento di Agraria, Università di Napoli Federico II, Via Università 100, 80055 Portici (Napoli), Italy **15** Dipartimento di Scienze Pure e Applicate, Università di Urbino Carlo Bo, Via Ca' Le Suore 2/4, 61029 Urbino (Pesaro e Urbino), Italy **16** Dipartimento di Biologia, Università di Bari Aldo Moro, Via E.

*Orabona 4, 70125 Bari, Italy* **17** *Via Madonna delle Grazie 146, 88813 Cirò (Crotone), Italy* **18** *Via Civitanova Marche 25, 25040 Esine (Brescia), Italy* **19** *Corso Francia 26, 10143 Torino, Italy* **20** *Dipartimento di Scienze Naturali, Istituto di Istruzione Superiore Leonardo da Vinci, Via N. Mandela 7, 62012 Civitanova Marche (Macerata), Italy* **21** *Centro Ricerche Floristiche Marche, Provincia di Pesaro e Urbino, Via E. Barsanti 18, 61122 Pesaro (Pesaro e Urbino), Italy* **22** *Via G. Marconi 26b, 46051 San Giorgio Bigarello (Mantova), Italy* **23** *Via Pallino 4, 61029 Urbino (Pesaro e Urbino), Italy* **24** *Dipartimento di Agraria, Università Mediterranea di Reggio Calabria, Località Feo di Vito snc, 89122 Reggio Calabria, Italy* **25** *Via G. Pascoli 14, 46051 San Giorgio Bigarello (Mantova), Italy* **26** *Dipartimento di Biologia, Università di Firenze, Via G. La Pira 4, 50121 Firenze, Italy* **27** *Istituto di Ricerca sugli Ecosistemi Terrestri, Consiglio Nazionale delle Ricerche (CNR-IRET), Via G. Moruzzi 1, 56124 Pisa, Italy* **28** *Via delle Conce 9, 06023 Gualdo Tadino (Perugia), Italy* **29** *Banca del Germoplasma della Tuscia, Università della Tuscia, Largo dell'Università snc, blocco c, 01100 Viterbo, Italy* **30** *Via Legnago 17, 46100 Mantova, Italy* **31** *Piazza G. Matteotti 25, 21050 Lonate Ceppino (Varese), Italy* **32** *Via Cuostile 5, 04024 Gaeta (Latina), Italy* **33** *Corso Brianza 3, 10153 Torino, Italy* **34** *Via Maestri del Lavoro 40, 64100 Teramo, Italy* **35** *Dipartimento di Scienze della Terra e dell'Ambiente, Università di Pavia, Via Sant'Epifanio 14, 27100 Pavia, Italy* **36** *Museo di Storia Naturale della Calabria ed Orto Botanico, Università della Calabria, Via A. Savinio, 87036 Arcavacata di Rende (Cosenza), Italy* **37** *Via San Giuseppe 36, 20863 Concorezzo (Monza e Brianza), Italy* **38** *Elitron, Via Capri 11/3, 20153 Milano, Italy* **39** *Dipartimento di Biologia, Università di Pisa, Via Derna 1, 56126 Pisa, Italy* **40** *Grazing Systems, Agroscope, Route de Duillier 50, 1260 Nyon, Switzerland* **41** *Scuola di Scienze Agrarie, Forestali e Ambientali, Università della Basilicata, Via Ateneo Lucano 10, 85100 Potenza, Italy* **42** *Via della Scuola 147, 06135 Perugia, Italy* **43** *Istituto per le Piante da Legno e l'Ambiente (IPLA), Corso Casale 476, 10132 Torino, Italy* **44** *Largo Brigata Cagliari 6, 13100 Vercelli, Italy* **45** *Dipartimento di Scienze e Tecnologie Ambientali, Biologiche e Farmaceutiche, Università della Campania Luigi Vanvitelli, Via A. Vivaldi 43, 81100 Caserta, Italy* **46** *Istituto di Bioscienze e Biorisorse, Consiglio Nazionale delle Ricerche (CNR-IBBR), Via G. Amendola 165/a, 70126 Bari, Italy* **47** *Via F. D'Ovidio 89, 00137 Roma, Italy* **48** *Centro Studi Bionaturalistici, Ce.S.Bi.N s.r.l., Via San Vincenzo 2, 16121 Genova, Italy* **49** *Sistema Museale di Ateneo, Università di Firenze, Via G. La Pira 4, 50121 Firenze, Italy*

Corresponding author: Gabriele Galasso (gabriele.galasso@comune.milano.it)

---

Academic editor: Lorenzo Peruzzi | Received 15 November 2021 | Accepted 29 November 2021 | Published 3 December 2021

---

**Citation:** Galasso G, Domina G, Angiolini C, Bacchetta G, Banfi E, Barberis D, Bardi S, Bartolucci F, Bonari G, Bovio M, Briozzo I, Brundu G, Buono S, Calvia G, Celesti-Grapow L, Cozzolino A, Cuenca-Lombrana A, Curuzzi M, D'Amico FS, Dagnino D, De Fine G, Fanfarillo E, Federici A, Ferraris P, Fiacchini D, Fiaschi T, Fois M, Gubellini L, Guidotti E, Hofmann N, Kindermann E, Laface VLA, Lallai A, Lanfredini P, Lazzaro L, Lazzari V, Lonati M, Loreti M, Lozano V, Magrini S, Mainetti A, Marchini M, Marignani M, Martignoni M, Mei G, Minutillo F, Mondino GP, Motti R, Musarella CM, Nota G, Olivieri N, Pallanza M, Passalacqua NG, Patera G, Pilon N, Pinzani L, Pittarello M, Podda L, Probo M, Ravetto Enri S, Rosati L, Salerno P, Selvaggi A, Soldano A, Sorgiu Cocco G, Spampinato G, Stinca A, Terzi M, Tondi G, Turcato C, Wellstein C, Lastrucci L (2021) Notulae to the Italian alien vascular flora: 12. Italian Botanist 12: 105–121. <https://doi.org/10.3897/italianbotanist.12.78010>

---

## Abstract

In this contribution, new data concerning the distribution of vascular flora alien to Italy are presented. It includes new records, confirmations, exclusions, and status changes for Italy or for Italian administrative regions. Nomenclatural and distribution updates published elsewhere are provided as Suppl. material 1.

**Keywords**

Alien species, floristic data, Italy, nomenclature

**How to contribute**

The text for the new records should be submitted electronically to Lorenzo Lastrucci ([lorenzo.lastrucci@unifi.it](mailto:lorenzo.lastrucci@unifi.it)). The corresponding specimen along with its scan or photograph has to be sent to FI Herbarium: Museo di Storia Naturale (Botanica), Sistema Museale di Ateneo, Via G. La Pira 4, 50121 Firenze (Italy). Those texts concerning nomenclatural novelties (typifications only for accepted names), status changes, exclusions, and confirmations should be submitted electronically to Gabriele Galasso ([gabriele.galasso@comune.milano.it](mailto:gabriele.galasso@comune.milano.it)). Each text should be within 1,000 characters (spaces included).

**Floristic records*****Albizia julibrissin* Durazz. (Fabaceae)**

+ (CAS) **MAR**: Pesaro (Pesaro e Urbino), Via S. Pertini ai margini del Ponte Giovanni XXIII (WGS84: 43.900625N, 12.875721E), margine stradale erboso, ca. 10 m, 18 July 2021, *L. Gubellini* (FI, PESA). – Casual alien species new for the flora of Marche.

A single individual has been observed, flowering in a roadside verge.

L. Gubellini, N. Hofmann

***Aubrieta deltoidea* (L.) DC. (Brassicaceae)**

+ (CAS) **PIE**: Salbertrand (Torino), fraz. San Romano, presso il Camping Gran Bosco (WGS84: 45.062215N, 6.867815E), interstizi tra un muretto e la strada asfaltata in prossimità di una aiuola coltivata, 1023 m, 3 April 2021, *M. Probo*, *M. Lonati* (FI). – Casual alien species new for the flora of Piemonte.

Some individuals occur spontaneously near a private garden where the species is cultivated as ornamental.

M. Probo, M. Lonati

***Bothriochloa pertusa* (L.) A.Camus (Poaceae)**

+ (NAT) **ITALIA (LIG)**: Sestri Levante (Genova), ZSC “IT1333308 Punta Manara”, loc. Ginestra (WGS84: 44.2617N, 9.4158E), bordo del sentiero, a margine di oliveto in coltura, ca. 110 m, SE, 23 July 2020, leg. *D. Dagnino*, *C. Turcato*, det. *E. Banfi* (FI, GE No. 4891, MSNM Nos. 50854, 50855). – Naturalized alien species new for the flora of Italy (Liguria).

This species is similar to *Bothriochloa insculpta* (Hochst. ex A.Rich.) A.Camus, represented in Italy by subsp. *panormitana* (Parl.) Giardina & Raimondo, from which is distinguished by the number and color of the racemes (3–8 brown-straw *vs* of 10–15 blackish) and by the lower glume bearing long woolly whitish hairs grouped in the distal half (Vega 2000). It is native to warm temperate and tropical Old World from where it has been introduced in Mesomerica, South America (Colombia) and southern North America (Alabama, Florida, Louisiana, Mississippi), while in Europe is reported from Sweden and considered doubtfully alien in Greece (Valdés and Scholz 2009+; POWO 2019+). It prefers uncultivated and grassy places, but at present it is impossible to evaluate the potential aggressiveness of the species.

E. Banfi, D. Dagnino, C. Turcato, G. Galasso

### ***Brugmansia aurea* Lagerh. (Solanaceae)**

+ (CAS) **CAM**: San Giorgio a Cremano (Napoli), al confine con Napoli, Via Cupa Rubinacci (WGS84: 40.834822N, 14.328418E), bordo strada, 32 m, 7 April 2021, leg. R. Motti, det. R. Motti, A. Cozzolino, A. Stinca (FI, PORUN-Motti); *ibidem*, 9 July 2021, A. Stinca (PORUN-Stinca). – Casual alien species new for the flora of Campania.

In Italy, two species belonging to the South American genus *Brugmansia* Pers. have been recorded: *B. aurea* in Calabria (Laface et al. 2020) and *B. suaveolens* (Humb. & Bonpl. ex Willd.) Sweet in Campania (Stinca 2020). The new finding refers to an individual probably originated vegetatively from plants cultivated nearby.

R. Motti, A. Cozzolino, A. Stinca

### ***Centaurea diluta* Aiton (Asteraceae)**

+ (NAT) **BAS**: Matera (Matera), confine tra Puglia e Basilicata, in prossimità del vulcanello di Gravina di Puglia (WGS84: 40.700063N, 16.428955E), incolti in prossimità di colture di orzo, 208 m, 3 June 2021, M. Terzi, F.S. D'Amico (FI). – Naturalized alien species new for the flora of Basilicata.

A population of *Centaurea diluta* was found on clayey soils along the edge of a path close to the border between Basilicata and Puglia.

M. Terzi, F.S. D'Amico

### ***Chasmanthe bicolor* (Gasp.) N.E.Br. (Iridaceae)**

+ (NAT) **SAR**: La Maddalena (Sassari), Parco Nazionale dell'Arcipelago di La Maddalena, Isola La Maddalena (WGS84: 41.236234N, 9.410872E), in prossimità delle strade e nelle radure della macchia, 67 m, 27 March 2021, G. Brundu, V. Lozano, V. Lazzeri (FI, *Herb. Uniss Agraria*). – Naturalized alien species new for the flora of Sardegna.

*Chasmanthe bicolor* is a perennial herb native to the Western Cape Province in South Africa (de Vos 1985; Duncan 2001).

V. Lozano, G. Brundu, V. Lazzeri

***Cupressus sempervirens* L. (Cupressaceae)**

+ (NAT) **CAL**: Reggio Calabria (Reggio Calabria), Via V. Florio, nei pressi del porto (WGS84: 38.119704N, 15.649376E), dentro il tronco cavo di una pianta di *Melia azedarach*, 23 m, 13 April 2021, leg. G. Spampinato, det. V.L.A. Laface, C.M. Musarella, G. Spampinato (FI, REGGIO); *ibidem*, Piani di San Nicola, fraz. Ortì (WGS84: 38.151801N, 15.695425E), bordo strada, 559 m, 18 July 2021, leg. V.L.A. Laface, det. V.L.A. Laface, C.M. Musarella, G. Spampinato (REGGIO); *ibidem*, Diminniti di Sambatello, nei pressi del cimitero (WGS84: 38.174036N, 15.702576E), terreno abbandonato, 425 m, 18 July 2021, leg. V.L.A. Laface, det. V.L.A. Laface, C.M. Musarella, G. Spampinato (REGGIO); Condofuri (Reggio Calabria), fraz. Straci (WGS84: 37.924573N, 15.844811E), nel bosco e a bordo strada, 33 m, 11 May 2021, leg. V.L.A. Laface, det. V.L.A. Laface, C.M. Musarella, G. Spampinato (REGGIO); *ibidem*, Trombia (WGS84: 37.937525N, 15.866372E), eucalipteto e bordo strada, 106 m, 18 July 2021, leg. V.L.A. Laface, det. V.L.A. Laface, C.M. Musarella, G. Spampinato (REGGIO); *ibidem*, fraz. Pietra (WGS84: 37.947734N, 15.865268E), pineta e bordo strada, 151 m, 18 July 2021, leg. V.L.A. Laface, det. V.L.A. Laface, C.M. Musarella, G. Spampinato (REGGIO); Montebello Jonico (Reggio Calabria), Canale (WGS84: 37.958997N, 15.695899E), eucalipteto e bordo strada, 148 m, 18 July 2021, leg. V.L.A. Laface, det. V.L.A. Laface, C.M. Musarella, G. Spampinato (REGGIO). – Naturalized alien species new for the flora of Calabria.

*Cupressus sempervirens* reproduces easily by seed and at most of the reported localities, the species has formed small populations, with some mature and reproductive adult individuals.

G. Spampinato, V.L.A. Laface, C.M. Musarella

***Cuscuta campestris* Yunck. (Convolvulaceae)**

+ (NAT) **LIG**. – Status change from casual to naturalized alien for the flora of Liguria.

We found several populations of *Cuscuta campestris* along the Magra Valley (La Spezia), showing a high number of individuals growing on different host plants (e.g., *Convolvulus arvensis* L., *Euphorbia maculata* L., *Xanthium italicum* Moretti, etc.) in ruderal environments linked to the riverside terraces or the anthropized areas of the Magra plain. We collected several herbarium specimens of these populations, currently housed in GE.

D. Dagnino, I. Briozzo, C. Turcato

***Cyrtomium falcatum* (L.f.) C.Presl (Dryopteridaceae)**

+ (CAS) **SAR**: Cagliari (Cagliari), Via Vittorio Veneto (WGS84: 39.225230N, 9.105523E), fessure di un muro di contenimento in pietra calcarea, 41 m, 25 February 2021, L. Rosati, M. Marignani (FI). – Casual alien species new for the flora of Sardegna.

We observed, growing on a wall colonized also by *Adiantum capillus-veneris* L. and *Cymbalaria muralis* G.Gaertn., B.Mey. & Scherb. subsp. *muralis*, a single individual.

L. Rosati, M. Marignani

***Delosperma cooperi* (Hook.f.) L.Bolus (Aizoaceae)**

+ (CAS) **ABR**: Teramo (Teramo), Via Conte Contin (WGS84: 42.656388N, 13.696388E), bordo stradale, ca. 254 m, 15 May 2021, *N. Olivieri* (FI). – Casual alien species new for the flora of Abruzzo.

Some individuals of the species are settled on the concrete roadside, sometimes covered with moss, together with *Sedum dasyphyllum* L. subsp. *dasyphyllum* and sporadically *S. palmeri* S.Watson, in an area not subject to foot traffic.

N. Olivieri

***Dimorphotheca fruticosa* (L.) Less. (Asteraceae)**

+ (CAS) **SAR**: Carloforte (Sud Sardegna), Isola di San Pietro, loc. Nasca (WGS84: 39.157107N, 8.264874E), bordo strada, dietro ad un muretto a secco nella macchia, 96 m, 6 March 2021, leg. *L. Rosati, M. Marignani, G. Cocco, S. Bardi*, det. *L. Rosati* (HLUC); *ibidem*, loc. Tacca Rossa (WGS84: 39.161726N, 8.302175E), scarpata stradale, 48 m, 7 March 2021, leg. *L. Rosati, M. Marignani, G. Cocco, S. Bardi*, det. *L. Rosati* (FI). – Casual alien species new for the flora of Sardegna.

Some flowering individuals were observed growing in garrigues dominated by *Cistus monspeliensis* L.

G. Sotgiu Cocco, L. Rosati, S. Bardi, M. Marignani

***Dracaena draco* (L.) L. subsp. *draco* (Asparagaceae)**

+ (CAS) **SAR**: Cagliari (Cagliari), Viale Buon Cammino (WGS84: 39.222723N, 9.115725E), epifita su *Celtis australis*, 94 m, 15 April 2021, *A. Lallai, G. Bacchetta, L. Podda* (FI, CAG). – Casual alien species new for the flora of Sardegna.

This species is native to Macaronesia and Morocco, where it grows on slopes in association with other xerophilous taxa (Almeida Pérez 2003). The juvenile specimen found in Sardegna grows epiphytic in the bifurcation of the branches on a decayed *Celtis australis* L. subsp. *australis*, approximately 20 m away from a mature individual.

A. Lallai, G. Bacchetta, L. Podda

***Erigeron philadelphicus* L. (Asteraceae)**

+ (CAS) **EMR**: Ferrara (Ferrara), Via Dosso Dossi (WGS84: 44.842018N, 11.619414E), vegetazione sinantropica ruderale, 10 m, 7 May 2021, leg. *M. Curuzzi, G. Mei*, det. *G. Mei* (FI, *Herb. G. Mei*). – Casual alien species new for the flora of Emilia-Romagna.

G. Mei, M. Curuzzi

***Euthamia graminifolia* (L.) Nutt. (Asteraceae)**

– **ITALIA (PIE).** – Alien species to be excluded from the flora of Italy (Piemonte).

The report of *Euthamia graminifolia* in Piemonte (Soldano and Sella 1988) is to be referred to *E. lanceolata* (L.) G.L.Nesom (see below).

G. Galasso, A. Soldano

***Euthamia lanceolata* (L.) G.L.Nesom (Asteraceae)**

+ (NAT) **ITALIA (PIE):** Castelletto Cervo (Biella), baraggia sul lato W della strada provinciale verso San Giacomo di Masserano (WGS84: 45.53388N, 8.24138E), brughiera, 229 m, no exp., 20 August 1990, *A. Soldano 8801* (*Herb. A. Soldano* sub. *E. graminifolia*); *ibidem*, baraggia lungo la strada SP315 San Giacomo–Buronzò (WGS84: 45.536587N, 8.240707E ± 10 m), brughiera, ca. 221 m, no exp., 12 September 2009, *G. Galasso* (MSNM Nos. 43684, 43685, 43686 sub. *E. graminifolia*); Masserano (Biella), lato W della Baraggia delle Quattro Madame (WGS84: 45.54800N, 8.25416E), brughiera, 235 m, no exp., 4 September 1993, *A. Soldano 9436* (*Herb. A. Soldano* sub. *E. graminifolia*). – Naturalized alien species new for the flora of Italy (Piemonte).

According to the recent revision of the genus *Euthamia* (Nesom 2021a, b), our specimens previously attributed to *E. graminifolia* (L.) Nutt. belong to *E. lanceolata*. Although the height of the involucre (4.0–4.2 mm) is more or less intermediate between the two species (3.6–4.2 mm in *E. lanceolata* vs 4.0–5.0 mm in *E. graminifolia*), stem and leaf surfaces are clearly hirtellous (*vs* glabrous).

G. Galasso, A. Soldano

***Gazania rigens* (L.) Gaertn. (Asteraceae)**

+ (NAT) **SAR.** – Status change from casual to naturalized alien for the flora of Sardegna.

*Gazania rigens* was detected as naturalized in the sand dunes of Torre dei Corsari (Arbus, Sud Sardegna) and in the small peninsula of Capo Coda Cavallo (San Teodoro, Sassari). These self-sustaining populations are fast-spreading, after a recent introduction as ornamentals in gardens.

M. Fois, A. Cuenca-Lombraña, G. Brundu

***Honorius boucheanus* (Kunth) Holub (Asparagaceae)**

+ (CAS) **LOM:** Mantova (Mantova), Corte Cherubine, Via Legnago 17 (WGS84: 45.165820N, 10.832494E), all'ombra di un filare d'alberi, 19 m, no exp., 24 April 2021, leg. *E. Guidotti, P. Lanfredini, M. Marchini*, det. *E. Guidotti, M. Pallanza, S. Orsenigo* (FI). – Casual alien species new for the flora of Lombardia.

*E. Guidotti, P. Lanfredini, M. Marchini, M. Pallanza*

***Hyacinthoides non-scripta* (L.) Chouard ex Rothm. (Asparagaceae)**

+ (CAS) **UMB**: Gualdo Tadino (Perugia), Appennino di Gualdo Tadino, Valle del Fønno, versante SW (WGS84: 43.226585N, 12.815555E), margine erboso delimitato da rocce calcaree rivestite da una fitta lecceta, 790 m, 2 April 2021, *M. Loreti, P. Salerno* (FI). – Casual alien species new for the flora of Umbria.

Only a group of five plants was found in an impervious Appennine area with a high level of wilderness, included into the ZSC “IT5210014 Monti Maggio-Nero (sommità)”.

M. Loreti, P. Salerno

***Ipheion uniflorum* (Lindl.) Raf. (Amaryllidaceae)**

+ (CAS) **LOM**: Concorezzo (Monza e Brianza), lungo Via G. Mazzini (WGS84: 45.585790N, 9.341909E), incolto, 172 m, 2 April 2021, *G. Patera* (FI). – Casual alien species new for the flora of Lombardia.

A few individuals of this species originated from seeds produced by some adults growing in a nearby garden.

G. Patera

***Koelreuteria paniculata* Laxm. (Sapindaceae)**

+ (NAT) **VDA**: Arnad (Aosta), presso la Chiesa di San Martino, dietro il giardino pubblico, lungo l’argine del Torrente d’Arnad (WGS84: 45.6446009N, 7.7206899E), greto e argini del torrente, molti esemplari in fruttificazione, 361 m, 2 August 2021, *A. Selvaggi* (FI); *ibidem*, più in basso, scendendo lungo il Torrente d’Arnad, nel greto (WGS84: 45.64437562N, 7.71966776E), greto fluviale, 358 m, 2 August 2021, *A. Selvaggi* (AO). – Naturalized alien species new for the flora of Valle d’Aosta.

The naturalized population extends more than 100 metres along the river Torrente d’Arnad and includes numerous individuals at different stages of growth. All the individuals originate from few cultivated plants grown in the public garden situated behind the San Martino church.

A. Selvaggi, P. Ferraris

***Melinis repens* (Willd.) Zizka subsp. *repens* (Poaceae)**

+ (INV) **SAR**. – Status change from naturalized to invasive alien for the flora of Italy (Sardegna).

Since the first report in 2018 (Galasso et al. 2019a) we have observed a rapid expansion of this taxon, which is spreading from roadsides of coastal areas to inland fields, to the extent that we believe it is becoming a problematic weed for the nearby crops.

G. Bacchetta, G. Calvia, L. Podda



***Nassella tenuissima* (Trin.) Barkworth (Poaceae)**

+ (CAS) **LOM**: Costa Volpino (Bergamo), nei pressi della ex cava di gesso lungo il margine destro della strada di recente costruzione che sale alla fraz. Volpino (WGS84: 45.836317N, 10.102783E), margine stradale, 202 m, SE, 28 May 2021, leg. A. Federici, det. G. Galasso, E. Banfi (FI, MSNM No. 50996); Milano (Milano), passaggio pedonale parallelo a Via E. Fieramosca, presso la Residenza Arcimboldi, recinzione al di sopra della trincea della linea tramviaria (WGS84: 45.515361N, 9.214027E), fughe nella pavimentazione stradale a mattonelle, 134 m, no exp., 2 June 2021, G. Galasso (FI, MSNM Nos. 50984, 50985). – Casual alien species new for the flora of Lombardia.

In both cases, the collected specimens were growing very far from the mother plants.

G. Galasso, E. Banfi, A. Federici

***Nelumbo nucifera* Gaertn. (Nelumbonaceae)**

+ (NAT) **TOS**. – Status change from casual to naturalized alien for the flora of Toscana.

The first records of this species for Toscana date back to Montelucchi (1964, 1970) from Massarosa (Lucca province), where it has been recorded again in 2017 (Peruzzi and Bedini 2021+). Here, new records from Parco di Fonte Santa (Bagno a Ripoli, Firenze, WGS84: 43.710670N, 11.372633E, 578 m, 29 July 2021, L. Lazzaro, L. Lastrucci, FI) and from Piazza delle Gondole in Pisa (WGS84: 43.716768N, 10.409048E, obs. B. Pierini, L. Peruzzi) are added. In these sites, the populations are in an evident naturalized status, with the presence of many flowers and fruits. We therefore propose the change of status for this species in Toscana from casual to naturalized.

L. Lazzaro, L. Lastrucci

+ (NAT) **MAR**: Potenza Picena (Macerata), c.da Castelletta, stagno artificiale (WGS84: 43.346644N, 13.657330E), stagno, 24 m, 10 July 2021, D. Fiacchini (FI). – Naturalized alien species new for the flora of Marche.

*Nelumbo nucifera* grows inside the artificial pond located less than 30 metres from the right bank of the Asola stream. The species occupies a total area of c. 1,500–2,000 m<sup>2</sup>.

D. Fiacchini, L. Gubellini

***Parasenegalia visco* (Lorentz ex Griseb.) Seigler & Ebinger (Fabaceae)**

– **SAR**. – Alien species to be excluded from the flora of Sardegna.

*Parasenegalia visco* was first reported by Podda et al. (2010) from Rio Santa Lucia in Capoterra (Cagliari) as a new casual alien species for Sardegna. Later, it was indicated by the same authors as a naturalized alien (Podda et al. 2012; Puddu et al. 2016). Field insights and a review of specimens in CAG have shown that these records are due to a misidentification of *Paraserianthes lophantha* (Willd.) I.C.Nielsen subsp. *lophantha*.

L. Podda, A. Lallai, G. Bacchetta

***Parkinsonia aculeata* L. (Fabaceae)**

+ (INV) **SAR.** – Status change from casual to invasive alien for the flora of Sardegnia.

Recently, rapid colonization from seeds in dense thickets have been observed in several areas from Cagliari to the road SS131 and to Santa Margherita (Pula, Cagliari), or wetlands near Cagliari such “Stagno di Santa Gilla”, and “Stagno di Molentargius” (Cagliari province).

G. Bacchetta, M. Fois, L. Podda

***Passiflora caerulea* L. (Passifloraceae)**

+ (NAT) **LAZ.** – Status change from casual to naturalized alien for the flora of Lazio.

During the last four years, investigations revealed that this species is widespread in northern Lazio with well-established populations in the provinces of Viterbo (e.g., Viterbo, Montalto di Castro, Oriolo Romano) and Roma, where it also grows on the beaches of Lake Bracciano. These populations regularly produce fruits and propagate both vegetatively and by seed.

S. Magrini, S. Buono

***Platanus hispanica* Mill. ex Münchh. (Platanaceae)**

+ (INV) **ITALIA (LAZ).** – Status change from naturalized to invasive alien for the flora of Italy (Lazio).

Recent investigations in the province of Roma revealed that this species has largely colonized the shores of the river Tiber and Aniene, all along the urban and suburban area and beyond, as well as other riparian habitats. From there, it is currently spreading also along roadsides and in archaeological sites (Celesti-Grapow and Ricotta 2020).

L. Celesti-Grapow

***Platycladus orientalis* (L.) Franco (Cupressaceae)**

+ (NAT) **VDA:** Saint-Vincent (Aosta), sulla collina tra Cillian e Felliey (WGS84: 45.739636N, 7.663596E), un esemplare inselvaticchito in fessura delle rupi di serpentino, 660 m, 26 May 2012, leg. *M. Bovio, G.P. Mondino*, det. *G.P. Mondino* (AO); Bard (Aosta), presso il sentiero che costeggia le rocce alla base del Forte di Bard (WGS84: 45.60614630N, 7.74672678E), fessure delle rocce “montonate”, 400 m, S, 27 July 2021, *A. Selvaggi* (FI); *ibidem* (WGS84: 45.6066190N, 7.7471075E), fessure delle rocce, 420 m, 2 August 2021, *A. Selvaggi* (AO). – Naturalized alien species confirmed for the flora of Valle d’Aosta.

Many individuals of this species have colonized the rock cracks at different points around the base of Forte di Bard; some of these plants are already fertile or ready to disperse the seeds. The presence of the species in Valle d’Aosta was previously an-

notated by Bovio (2014) as casual, but not by Galasso et al. (2018a). Other findings were recorded also in Collina di Châtillon (WGS84: 45.739636N, 7.663596E and 45.753752N, 7.615628E, 17 April 2019, obs. *M. Bovio, C. Ganz, M. Broglio, G. Trompetto*), Pont-Saint-Martin (WGS84: 45.598159N, 7.801948E, 1 May 2019, obs. *M. Bovio*), and between Plan de Brun and Perloz (WGS84: 45.606255N, 7.802994E, 21 May 2021, obs. *M. Bovio, C. Ganz, O. Deval, G. Jacquemet*).

A. Selvaggi, M. Bovio, G.P. Mondino

***Populus ×canadensis* Moench (Salicaceae)**

+ (INV) **ITALIA (LAZ)**. – Status change from naturalized to invasive alien for the flora of Italy (Lazio).

+ (INV) **SAR**. – Status change from casual to invasive alien for the flora of Sardegna.

Recent investigations in Lazio revealed that this nothospecies has largely spread in riparian habitats along the shores of the river Tevere and its affluents, in the urban and suburban area of Roma and beyond. It is also currently spreading in archaeological sites and on the top of buildings, particularly in roof gutters. Similarly, in Sardegna, it is spreading in suburban areas and in riparian sites from planted stands (e.g., along the river Tirso at Fordongianus, Oristano, WGS84: 39.997N, 8.807E, obs. *G. Brundu*).

G. Brundu, L. Celesti-Grapow

***Pteris multifida* Poir. (Pteridaceae)**

+ (CAS) **TOS**: Pisa (Pisa), Via Roma 56 (WGS84: 43.719187N, 10.395475E), in tombino, 4 m, 10 June 2021, *L. Pinzani* (FI, *Herb. L. Pinzani*). – Casual alien species new for the flora of Toscana.

L. Pinzani

***Quercus palustris* Münchh. (Fagaceae)**

+ (CAS) **ITALIA (LOM)**: Milano (Milano), piazza d'Armi, tra Via delle Forze Armate, Via della Rovere e Via G. Mazzarino (WGS84: 45.464368N, 9.122097E), boscaglia umida, 123 m, no exp., 7 July 2021, leg. *G. Galasso*, det. *G. Galasso, E. Banfi* (FI, MSNM Nos. 51005, 51006, 51007, 51008); Besnate (Varese), stagno Lagozzetta (WGS84: 45.703333N, 8.744722E), spontaneizzata sulle rive boschive dell'area umida, 276 m, no exp., 18 July 2021, leg. *M. Martignoni*, det. *G. Galasso, E. Banfi* (FI, MSNM No. 51038). – Casual alien species new for the flora of Italy (Lombardia).

In Milano, some individuals of the species, identified according to Jensen (1997), grow in a former semi-natural military area, with temporary pools rich in particularly interesting species.

G. Galasso, E. Banfi, M. Martignoni, N. Pilon

***Rhus typhina* L. (Anacardiaceae)**

+ (CAS) **ABR**: Bellante (Teramo), loc. Bellante Stazione, Via del Commercio (WGS84: 42.706944N, 13.852777E), vegetazione lungo il bordo stradale, ca. 98 m, 19 July 2021, *N. Olivieri* (FI). – Casual alien species new for the flora of Abruzzo.

Several young shrubby individuals occur in the record site, some of which bearing fruit, on both sides of a road.

N. Olivieri

***Robinia neomexicana* A.Gray (Fabaceae)**

+ (CAS) **MAR**: Pietrarubbia (Pesaro e Urbino), lungo la strada SP1 (WGS84: 43.790709N, 12.361800E), siepi, ca. 715 m, 10 June 2021, *L. Gubellini* (FI, PESA); *ibidem*, 13 August 2021, *L. Gubellini* (FI, PESA). – Casual alien species new for the flora of Marche.

The species was identified according to Peabody (1984) and Isely and Peabody (1984).

L. Gubellini, N. Hofmann

***Salvia hispanica* L. (Lamiaceae)**

+ (CAS) **CAL**: Cirò (Crotone), nei pressi dell'abitato, poco a N di Via Madonna delle Grazie (strada SP7) (WGS84: 39.382263N, 17.063990E), incolto, 290 m, 12 September 2019, *G. De Fine* (CLU). – Casual alien species new for the flora of Calabria.

N.G. Passalacqua, G. De Fine

***Scirpus atrovirens* Willd. subsp. *hattorianus* (Makino) Verloove & Lambinon (Cyperaceae)**

+ (CAS) **LAZ**: Latina (Latina), fraz. Borgo Piave (WGS84: 41.486944N, 12.846667E), sponde di un piccolo pantano, suolo sabbioso e argilloso, 28 m, 5 July 1999, leg. *F. Minutillo*, det. *L. Lastrucci*, conf. *F. Verloove* (FI). – Casual alien subspecies new for the flora of Lazio.

The specimen was identified according to Whittimore and Schuyler (2002).

F. Minutillo, G. Tondi

***Sedum rubrotinctum* R.T.Clausen (Crassulaceae)**

+ (CAS) **MAR**: Cupra Marittima (Ascoli Piceno), margine della strada SS16 Adriatica (WGS84: 43.0291619N, 13.8575740E), margine stradale, ca. 6 m, 3 August 2020, *N. Olivieri* (FI). – Casual alien species new for the flora of Marche.

This Mexican species, identified according to Groendijk-Wilders and Springate (2011) and Horwath (2014), was recently reported as a casual alien in Campania by Del Guacchio et al. (2020). In Cupra Marittima this culton has colonized the edge of the sidewalk in an area of limited extension within the town. The plant grows on a thin and not very developed substrate.

N. Olivieri

***Semiarundinaria fastuosa* (Lat.-Marl. ex Mitford) Makino (Poaceae)**

+ (CAS) **LOM**: Bergamo (Bergamo), Parco Regionale dei Colli di Bergamo, inizio del sentiero di Via dei Vasi partendo da Via Castagneta, lato a valle (WGS84: 45.71567N, 9.65165E), ex ceduo di castagno in evoluzione verso un bosco misto di farina, carpino bianco e acero campestre, ca. 380 m, NE, 13 July 2021, *E. Banfi* (FI); *ibidem*, 24 July 2021, *E. Banfi* (MSNM Nos. 51032, 51033, 51034, 51035, 51036, 51037, 51352, 51353). – Casual alien species new for the flora of Lombardia.

*Semiarundinaria fastuosa* is a bamboo native to central-southern Japan, cultivated as ornamental in Italy and escaped in Piemonte (Galasso et al. 2019b), to whose report we refer for the diagnostic characters of the species. Other individuals have been observed in the semi-abandoned garden of a property in Via F. Cavagnis, about 1 km away, testifying to a previous historical use of the species in Bergamo.

E. Banfi, G. Galasso

***Sesbania punicea* (Cav.) Benth. (Fabaceae)**

+ (INV) **SAR**. – Status change from naturalized to invasive alien for the flora of Sardegna.

The species is currently considered as naturalized, especially along freshwater courses (Galasso et al. 2018b). However, a large and spreading population has been observed along ‘Bau sa Teula’ (Villagrande Strisaili, Nuoro), where it is rapidly colonizing the coastal sector of the same river basin (Tortoli and Lotzorai, Nuoro). Accordingly, its status needs to be changed to invasive.

M. Fois, A. Cuenca-Lombraña, G. Bacchetta

***Sorbaria tomentosa* (Lindl.) Rehder (Rosaceae)**

+ (CAS) **EMR**: Castell’Arquato (Piacenza), muro a secco di Via Sforza Caolzio (WGS84: 44.851962N, 9.868245E), muro a secco, 198 m, 1 September 2020, *D. Barberis*, *A. Mainetti*, *G. Nota* (FI). – Casual alien species new for the flora of Emilia-Romagna.

A single specimen, about 1 m tall and bearing fruits, has settled in the interstices of a dry-stone wall near private gardens and vegetable gardens. The identification was done according to Rahn (1989) and Tomaszewski (2001) who reported the hairiness of the follicles as diagnostic. This is in contrast with the identification key by Pignatti et al. (2019), which uses the characters number of nerves per leaflet and direction of the follicles in the infructescence, thus giving a false determination in favour of the similar *Sorbaria sorbifolia* (L.) A. Braun.

D. Barberis, A. Mainetti, G. Nota

***Stenotaphrum secundatum* (Walter) Kuntze (Poaceae)**

+ (CAS) **CAL**: Motta San Giovanni (Reggio Calabria), fraz. Lazzaro (WGS84: 37.973402N, 15.661162E), bordo strada, 4 m, 9 July 2021, *G. Mei* (REGGIO, *Herb. G. Mei*); Reggio Calabria (Reggio Calabria), Catona (WGS84: 38.190620N,

15.646328E), bordo strada, 20 m, 11 July 2021, leg. *V.L.A. Laface*, det. *V.L.A. Laface*, *C.M. Musarella*, *G. Spampinato* (FI, REGGIO). – Casual alien species new for the flora of Calabria.

V.L.A. Laface, G. Mei, C.M. Musarella

***Tecomaria capensis* (Thunb.) Spach (Bignoniaceae)**

+ (CAS) **LAZ**: Gaeta (Latina), pendice W di Monte Orlando, Via Santa Maria Ausiliatrice (WGS84: 41.208235N, 13.581049E), boscaglie incolte sul bordo strada, 88 m, 9 January 2020, *S. Ravetto Enri*, *M. Pittarello*, *M. Lonati* (FI). – Casual alien species new for the flora of Lazio.

A small population of this species, occupying an area of approximately 5×5 m, has been found on the edge of the road between Gaeta and Monte Orlando. Several seedlings occur near an adult individual.

S. Ravetto Enri, M. Pittarello, M. Lonati

***Ulmus pumila* L. (Ulmaceae)**

+ (NAT) **TOS**: Siena (Siena), Viale Sardegna (strada SR2) (WGS84: 43.327430N, 11.331531E), margini stradali e ruderi, 281 m, 14 June 2020, leg. *E. Fanfarillo*, det. *E. Fanfarillo*, *T. Fiaschi*, *C. Angiolini* (FI, SIENA); *ibidem*, 22 February 2021, leg. *E. Fanfarillo*, det. *E. Fanfarillo*, *T. Fiaschi*, *C. Angiolini* (FI, SIENA); *ibidem*, 13 April 2021, leg. *T. Fiaschi*, det. *T. Fiaschi*, *E. Fanfarillo*, *C. Angiolini* (FI, SIENA). – Naturalized alien species new for the flora of Toscana.

*Ulmus pumila* is present with several individuals, sometimes of medium-large size, colonizing roadsides, sidewalks, and wasteland.

E. Fanfarillo, T. Fiaschi, C. Angiolini

***Yucca aloifolia* L. (Asparagaceae)**

+ (CAS) **TAA**: Naturno (Bolzano), Val Venosta (WGS84: 46.6506277N, 10.9882332E), radura boschiva di un bosco termofilo a roverella, 590 m, 1 August 2020, *G. Bonari* (FI). – Casual alien species new for the flora of Trentino-Alto Adige.

Sporadic individuals of this species were observed.

G. Bonari, E. Kindermann, C. Wellstein

**Nomenclatural and distribution updates from other literature sources**

Nomenclatural, status, distribution updates, and corrections to Galasso et al. (2018a) are provided in Suppl. material 1.

G. Galasso, F. Bartolucci

## Acknowledgements

We gratefully acknowledge the Acta Plantarum staff, Sebastiano Andreatta, Daniela Longo, Francesco Roma-Marzio, and Davide Tomasi who provided distribution information, and Filip Verloove who confirmed the identification of the *Scirpus atrovirens* subspecies.

## References

- Almeida Pérez RS (2003) Sobre la presencia de *Dracaena draco* (L.) L. en Gran Canaria (Islas Canarias): aportación corológica, status actual y significación biogeográfica. *Botánica Macaronésica* 24: 17–38.
- Bovio M (2014) Flora vascolare della Valle d'Aosta. Repertorio commentato e stato delle conoscenze. Testolin editore, Aosta.
- Celesti-Grapow L, Ricotta C (2020) Plant invasion as an emerging challenge for the conservation of heritage sites: the spread of ornamental trees on ancient monuments in Rome, Italy. *Biological Invasions* 23(4)[2021]: 1191–1206. <https://doi.org/10.1007/s10530-020-02429-9>
- de Vos MP (1985) Revision of the South African genus *Chasmanthe* (Iridaceae). *South African Journal of Botany* 51(4): 253–261. [https://doi.org/10.1016/S0254-6299\(16\)31654-4](https://doi.org/10.1016/S0254-6299(16)31654-4)
- Del Guacchio E, De Natale A, Stinca A (2020) Notes to the non-native flora of Campania (southern Italy). *Atti della Società Toscana di Scienze Naturali, Memorie, Serie B* 127: 39–49. <https://doi.org/10.2424/ASTSN.M.2020.07>
- Duncan G (2001) *Chasmanthe*. Notes on their cultivation and propagation, with particular reference to *Chasmanthe bicolor*. *Veld & Flora* 87(3): 108–111. [https://hdl.handle.net/10520/AJA00423203\\_2548](https://hdl.handle.net/10520/AJA00423203_2548)
- Galasso G, Conti F, Peruzzi L, Ardenghi NMG, Banfi E, Celesti-Grapow L, Albano A, Alessandrini A, Bacchetta G, Ballelli S, Bandini Mazzanti M, Barberis G, Bernardo L, Blasi C, Bouvet D, Bovio M, Cecchi L, Del Guacchio E, Domina G, Fascetti S, Gallo L, Gubellini L, Guiggi A, Iamonico D, Iberite M, Jiménez-Mejías P, Lattanzi E, Marchetti D, Martinetto E, Masin RR, Medagli P, Passalacqua NG, Peccenini S, Pennesi R, Pierini B, Podda L, Poldini L, Prosser F, Raimondo FM, Roma-Marzio F, Rosati L, Santangelo A, Scoppola A, Scortegagna S, Selvaggi A, Selvi F, Soldano A, Stinca A, Wagensommer RP, Wilhalm T, Bartolucci F (2018a) An updated checklist of the vascular flora alien to Italy. *Plant Biosystems* 152(3): 556–592. <https://doi.org/10.1080/11263504.2018.1441197>
- Galasso G, Domina G, Alessandrini A, Ardenghi NMG, Bacchetta G, Ballelli S, Bartolucci F, Brundu G, Buono S, Busnardo G, Calvia G, Capece P, D'Antraccoli M, Di Nuzzo L, Fanfarillo E, Ferretti G, Guarino R, Iamonico D, Iberite M, Latini M, Lazzaro L, Lonati M, Lozano V, Magrini S, Mei G, Mereu G, Moro A, Mugnai M, Nicoletta G, Nimis PL, Oliveri N, Pennesi R, Peruzzi L, Podda L, Probo M, Prosser F, Ravetto Enri S, Roma-Marzio F, Ruggero A, Scafidi F, Stinca A, Nepi C (2018b) Notulae to the Italian alien vascular flora: 6. *Italian Botanist* 6: 65–90. <https://doi.org/10.3897/italianbotanist.6.30560>
- Galasso G, Domina G, Ardenghi NMG, Aristarchi C, Bacchetta G, Bartolucci F, Bonari G, Bouvet D, Brundu G, Buono S, Caldarella O, Calvia G, Cano-Ortiz A, Corti E, D'Amico

- FS, D'Antraccoli M, Di Turi A, Dutto M, Fanfarillo E, Ferretti G, Fiaschi T, Ganz C, Guarino R, Iberite M, Laface VLA, La Rosa A, Lastrucci L, Latini M, Lazzaro L, Lonati M, Lozano V, Luchino F, Magrini S, Mainetti A, Manca M, Mugnai M, Musarella CM, Nicoletta G, Olivieri N, Orrù I, Paziienza G, Peruzzi L, Podda L, Prosser F, Ravetto Enri S, Restivo S, Roma-Marzio F, Ruggero A, Scoppola A, Selvi F, Spampinato G, Stinca A, Terzi M, Tiburtini M, Tornatore E, Vetromile R, Nepi C (2019a) Notulae to the Italian alien vascular flora: 7. *Italian Botanist* 7: 157–182. <https://doi.org/10.3897/italianbotanist.7.36386>
- Galasso G, Domina G, Andreatta S, Angiolini C, Ardenghi NMG, Aristarchi C, Arnoul M, Azzella MM, Bacchetta G, Bartolucci F, Bodino S, Bommartini G, Bonari G, Buono S, Buono V, Caldarella O, Calvia G, Corti E, D'Antraccoli M, De Luca R, De Mattia F, Di Natale S, Di Turi A, Esposito A, Ferretti G, Fiaschi T, Fogu MC, Forte L, Frigerio J, Gubellini L, Guzzetti L, Hofmann N, Laface VLA, Laghetti G, Lallai A, La Rosa A, Lazzaro L, Lodetti S, Lonati M, Luchino F, Magrini S, Mainetti A, Marignani M, Maruca G, Medagli P, Mei G, Menini F, Mezzasalma V, Misuri A, Mossini S, Mugnai M, Musarella CM, Nota G, Olivieri N, Padula A, Pascale M, Pasquini F, Peruzzi L, Picella G, Pinzani L, Pirani S, Pittarello M, Podda L, Ravetto Enri S, Rifici CD, Roma-Marzio F, Romano R, Rosati L, Scafidi F, Scarici E, Scarici M, Spampinato G, Stinca A, Wagensommer RP, Zanoni G, Nepi C (2019b) Notulae to the Italian alien vascular flora: 8. *Italian Botanist* 8: 63–93. <https://doi.org/10.3897/italianbotanist.8.48621>
- Groendijk-Wilders N, Springate L (2011) *Sedum* L. In: Cullen J, Knees SG, Cubey HS (Eds) *The European garden flora. A manual for the identification of plants cultivated in Europe, both out-of-doors and under glass*. Ed. 2, Vol. 3. Cambridge University Press, Cambridge, 36–50.
- Horwath B (2014) *The plant lover's guide to sedums*. Timber Press, Portland.
- Isely D, Peabody FJ (1984) *Robinia* (Leguminosae: Papilionoidea). *Castanea* 49(4): 187–202.
- Jensen RJ (1997) *Quercus* Linnaeus sect. *Lobatae* Loudon. In: *Flora of North America* Editorial Committee (Ed.) *Flora of North America North of Mexico*, Vol. 3. Oxford University Press, New York, Oxford, 447–468.
- Laface VLA, Musarella CM, Cano Ortiz A, Quinto Canas R, Cannavò S, Spampinato G (2020) Three new alien taxa for Europe and a chorological update on the alien vascular flora of Calabria (southern Italy). *Plants* 9(9): e1181. <https://doi.org/10.3390/plants9091181>
- Montelucci G (1964) Ricerche sulla vegetazione dell'Etruria XIII. Materiali per la flora e la vegetazione di Viareggio. *Webbia* 19(1): 73–347. <https://doi.org/10.1080/00837792.1964.10669804>
- Montelucci G (1970) Le paludi e il Lago di Massaciuccoli. In: AaVv. *Escursione sociale in Versilia e sulle Alpi Apuane*, 16–19 giugno 1969. *Informatore Botanico Italiano* 1(3)[1969]: 136–137.
- Nesom GL (2021a) Taxonomic revision of *Euthamia* (Asteraceae). *Phytoneuron* 2021-34: 1–182.
- Nesom GL (2021b) Key to the species of *Euthamia* (Asteraceae: Astereae). *Phytoneuron* 2021-44: 1–3.
- Peabody FJ (1984) Revision of the genus *Robinia* (Leguminosae: Papilionoideae). Iowa State University, Ames. *Retrospective Theses and Dissertations*: 7787. <https://doi.org/10.31274/rtd-180813-5895>
- Peruzzi L, Bedini G [Eds] (2021+) *Wikiplantbase #Toscana v2.1*. <http://bot.biologia.unipi.it/wpb/toscana/index.html> [accessed 29.08.2021]
- Pignatti S, Guarino R, La Rosa M (2019) *Flora d'Italia*. Ed. 2, Vol. 4. Edagricole, Bologna.



- Podda L, Fraga i Arguimbau P, Mayoral García-Berlanga O, Mascia F, Bacchetta G (2010) Comparación de la flora exótica vascular en sistemas de islas continentales: Cerdeña (Italia) y Baleares (España). *Anales del Jardín Botánico de Madrid* 67(2): 157–176. <https://doi.org/10.3989/ajbm.2251>
- Podda L, Lazzeri V, Mascia F, Mayoral O, Bacchetta G (2012) The checklist of the Sardinian alien flora: an update. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca* 40(2): 14–21. <https://doi.org/10.15835/nbha4028225>
- POWO (2019+) Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew. <http://www.plantsoftheworldonline.org/> [accessed 02.01.2021]
- Puddu S, Podda L, Mayoral O, Delage A, Hugot L, Petit Y, Bacchetta G (2016) Comparative analysis of the alien vascular flora of Sardinia and Corsica. *Notulae Botanicae Horti Agrobotanici Cluj-Napoca* 44(2): 337–346. <https://doi.org/10.15835/nbha44210491>
- Rahn K (1989) A survey of the genus *Sorbaria* (Rosaceae). *Nordic Journal of Botany* 8(6): 557–563. <https://doi.org/10.1111/j.1756-1051.1989.tb01728.x>
- Soldano A, Sella A (1988) *Solidago graminifolia* (L.) Salisb., esotica nuova per la flora italiana. *Rivista Piemontese di Storia Naturale* 9: 117–119.
- Stinca A (2020) *Brugmansia suaveolens* (Humb. & Bonpl. ex Willd.) Sweet (Solanaceae): an alien species new to continental Europe. *BioInvasions Records* 9(4): 660–669. <https://doi.org/10.3391/bir.2020.9.4.01>
- Tomaszewski D (2001) *Sorbaria* species cultivated in Poland. *Dendrobiology* 46: 59–64.
- Valdés B, Scholz H [with contributions from Raab-Straube E von, Parolly G] (2009+) Poaceae (pro parte majore). In: Euro+Med Plantbase – the information resource for Euro-Mediterranean plant diversity. <http://ww2.bgbm.org/EuroPlusMed/> [accessed: 15.12.2020]
- Vega AS (2000) Revisión taxonómica de las especies americanas del género *Bothriochloa* (Poaceae: Panicoideae: Andropogoneae). *Darwiniana* 38(1–2): 127–186.
- Whittemore AT, Schuyler AE (2002) *Scirpus* Linnaeus. In: Flora of North America Editorial Committee (Ed.) *Flora of North America North of Mexico*, Vol. 23. Oxford University Press, New York, Oxford, 8–21.

## Supplementary material I

### Supplementary data

Authors: Gabriele Galasso, Fabrizio Bartolucci (Eds)

Data type: species data

Explanation note: 1. Nomenclatural updates; 2. Note updates; 3. Distribution updates; 4. Synonyms, misapplied or included names.

Copyright notice: This dataset is made available under the Open Database License (<http://opendatacommons.org/licenses/odbl/1.0/>). The Open Database License (ODbL) is a license agreement intended to allow users to freely share, modify, and use this Dataset while maintaining this same freedom for others, provided that the original source and author(s) are credited.

Link: <https://doi.org/10.3897/italianbotanist.12.78010.suppl1>