

Supplementary Materials

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Supplementary Material 1. Species native to South Africa, present in Mexico in the wild, including a justification of their inclusion as South African natives and their classification in Mexico. For the abbreviations of the herbaria, see Table 1.

Scientific name	Comments
Acanthaceae	
<i>Thunbergia alata</i> Bojer ex Sims	Non-controversial native area. Its native distribution covers central and southern Africa (Pyšek et al. 2020). In Mexico it has naturalized (Villaseñor & Espinosa-García 2004) and is an important weed in tropical regions. The earliest record was found in the National Herbarium (MEXU) and is from 1908, Cuautla, Morelos (Collected by C. Conzatti, collection number 2342).
Aizoaceae	
<i>Carpobrotus edulis</i> (L.) N.E.Br.	Non-controversial native area. It is native and endemic to the Capense biogeographic region of South Africa (Hartmann 2017a; Pyšek et al. 2020; Parker 2022). In Mexico it has naturalized (Villaseñor & Espinosa-García 2004) and is an important weed especially in the northwestern part of the country. The oldest herbarium record (SD) in Mexico was from 1980 in Rosarito, Baja California (Collected by R. Moran, collection number 28184).
<i>Mesembryanthemum crystallinum</i> L.	There are contradictory data on the native range of this species. The CABI and POWO websites indicate a wide native distribution that includes North Africa, East Asia, and southern Africa. But a recent publication based on historical and ecological data showed that it is native to southern Africa (Gerbaulet & Hartmann 2017; also see Germishuizen & Meyer 2003); the authors do not give details, but we follow their judgement. It has been present in Mexico (Villaseñor & Espinosa-García 2004) for at least 100 years. There are wild populations in the northwestern part of the country. The first herbarium record (MICH) was from Tijuana, Baja California, in 1920 (collected by L. Fisher, without collection number).

<i>Mesembryanthemum nodiflorum</i> L.	Non-controversial native area. It is native to South Africa (Gerbaulet & Hartmann 2017; Pyšek et al. 2020) and is present in Mexico (Villaseñor & Espinosa-García 2004). There are wild populations in the northwestern part of the country. The first herbarium record (MEXU) was from Rosarito, Baja California in 1929 (collected by Wiggins and Gillespie, collection number 3898).
<i>Trianthema portulacastrum</i> L.	The native range of this species is controversial. POWO (2024) reports native regions in tropical America, Africa and Asia; in Flora del Bajío it was considered native to the Old World (Ocampo-Acosta 2002). However, based on a recent analysis of historical and ecological data it is native to southern Africa (Hartmann 2017b; also see Jeffrey 1960; Germishuizen & Meyer 2003); the authors do not give details, but we follow their judgement. The species has a long history of existence in Mexico (Ocampo-Acosta 2002). The first herbarium record (MEXU) was from Rosario, Sinaloa in 1897 (collected by J. N. Rose, collection number 1835).
Apocynaceae	
<i>Gomphocarpus physocarpus</i> E.Mey.	Non-controversial native area. It is native and endemic to South Africa (Germishuizen & Meyer 2003; Pyšek et al. 2020). It is not included in published lists of introduced and naturalized plants in Mexico. However, there is abundant photographic evidence in Naturalista of wild-growing populations. It has been present in Mexico for at least 50 years as an ornamental. The first herbarium record (MEXU) was from Fortín, Veracruz in 1969 (collected by A. Gómez Pompa, collection number 4619).
Araceae	
<i>Zantedeschia aethiopica</i> (L.) Spreng.	Non-controversial native area. It is native and endemic to the Capense region of South Africa (Letty 1973; Pyšek et al. 2020), present in Mexico (Villaseñor & Espinosa-García 2004) and widely cultivated. It naturalizes in humid sites in the cloud forest biome, and along irrigation ditches. The first herbarium record (MEXU) was from 1925 in Chapultepec, Mexico City (collected by A. L. Herrera, collection number 158).
Asparagaceae	
<i>Dracaena hyacinthoides</i> (L.) Mabb. (= <i>Sansevieria hyacinthoides</i> (L.) Druce)	Non-controversial native area. It is native to South Africa (Wijnands 1973) and is present in Mexico (Villaseñor & Espinosa-García 2004). It was originally introduced as an ornamental, but evidence of wild populations was found in the Yucatan Peninsula (information provided in herbarium specimen and photos from Naturalista website). The first herbarium record (MEXU) was in Champotón, Campeche in 1981 (collected by H. Quero and R. Grether, collection number 3036).
Asteraceae	
<i>Arctotheca prostrata</i> (Salisb.) Britten	Non-controversial native area. It is native and endemic to South Africa (Karis et al. 2009) and was recently introduced to Mexico. It forms wild-growing populations in the Valley of Mexico (Hinojosa-Espinosa & Villaseñor 2015; Espinosa-García & Villaseñor 2017). The first Herbarium record (MEXU) was in 2013 in southern Mexico City (collected by O. Hinojosa-Espinosa, collection number 580).
<i>Cotula coronopifolia</i> L.	Non-controversial native area. It is native and endemic to South Africa (Van Der Toorn 1980; Pyšek et al. 2020) and widely distributed in Mexico (Villaseñor & Espinosa-García 2004) where it has formed wild populations mainly in the northwestern part of the territory. The first herbarium record (SD) was from Ensenada, Baja California in 1936 (collected by C. F. Harbison, without collection number).
<i>Senecio inaequidens</i> DC.	Non-controversial native area. It is native and endemic to South Africa, particularly the Drakensberg region (Bossdorf et al. 2005; Pyšek et al. 2020). It is a recently introduced species to Mexico (Rzedowski et al. 2003; Villaseñor & Espinosa-García 2004). The first herbarium record (MEXU) found in our revision was from 1992 in Texcoco, Mexico (collected by J. García, without collection number).

	number); however, the first collection reported in the literature corresponded to populations in Amealco, Querétaro in 1990 (J. Rzedowski et al. 2003). It has formed wild populations throughout central Mexico, from Michoacán to Veracruz.
Cucurbitaceae	
<i>Cucumis anguria</i> L.	It is native to eastern and southern Africa, probably including South Africa, based on historical and ecological data, and related species (Meeuse 1958; Chen & Zhou 2011). SANBI and Germishuizen & Meyer (2003) report it as native in South Africa, however POWO (2024) reports it as introduced in that country. It is an introduced species to Mexico (Villaseñor & Espinosa-García 2004). The first herbarium record (NY) was from 1921 in Panuco, Veracruz (collected by C. A. Purpus, collection number 8635).
<i>Momordica balsamina</i> L.	Non-controversial native area. It is native to central and southern Africa (Germishuizen & Meyer 2003; Bharathi & John 2013) and was included by Villaseñor & Espinosa-García (2004) in their list of introduced species. There are only very few specimens or photographs showing clearly wild-growing populations, but they do exist, so we accept this species here. The first herbarium record (MEXU) was from 1986 in Ocosingo, Chiapas (collected by E. Martínez, collection number 17821). The widespread and possibly African <i>Momordica charantia</i> is not considered native in South Africa (Germishuizen & Meyer 2003; SANBI 2016). There is also some discussion on the taxonomic separation of both species.
Cyperaceae	
<i>Cyperus esculentus</i> L.	The native region of this species is controversial. Different authors indicate different areas, including Africa, South Asia, and America (Germishuizen & Meyer 2003; González-Elizondo et al. 2018). However, a recent genetic study appears to support an African origin without more details (De Castro et al. 2015) and SANBI considers it native. It has been present in the wild in Mexico for more than 100 years (Villaseñor & Espinosa-García 2004). The first herbarium (MEXU) record was in 1886 from Paso del Norte, Chihuahua (collected by C.G. Pringle, without collection number).
<i>Cyperus involucratus</i> Rottb.	Non-controversial native area. It is native to southern Africa (Baijnath 1975; Pyšek et al. 2020) and present in the wild in Mexico (Villaseñor & Espinosa-García 2004) where it arrived almost 100 years ago. The first herbarium (MEXU) record was from 1938 in Cuernavaca, Morelos (collected by E. Lyonnet, collection number 2803).
Iridaceae	
<i>Gladiolus dalenii</i> Van Geel	Non-controversial native area. It is native to southern Africa (Cantor and Tolety 2011) and recently introduced to Mexico. The first herbarium record (MEXU) was from 1992 in Coyoacán, D.F. (collected by A. Díaz-Camaño, without collection number, as an ornamental). It seems to be forming wild populations in recent years in Puebla (information provided in herbarium specimen collected by O. López in 2016, HUAP Herbarium) and there are several records in Naturalista.
Lamiaceae	
<i>Leonotis nepetifolia</i> (L.) R.Br.	Non-controversial native area. It is native to South Africa (Rzedowski & Rzedowski 2005; Pyšek et al. 2020), with abundant wild populations in Mexico (Villaseñor & Espinosa-García 2004). The first herbarium record (MEXU) was from 1906 in Oaxaca, Oaxaca (collected by C. Conzattii, collection number 1524).
Malvaceae	
<i>Sida rhombifolia</i> L.	It was difficult to determine the native range of this species. Some authors refer to it as pantropical (Fryxell 1993); POWO shows a native range from Africa through South Asia. It is probably native to Africa south of the Sahara, with the native area extending to South Africa, based on morphological data (Verdcourt 2004). Pyšek et al. (2020), SANBI (2016) and Germishuizen & Meyer (2003) consider it native, so we decided to include it as a South African species. In Mexico it is

	found wild almost everywhere and has been present for more than 100 years (Fryxell 1993). The first herbarium record (CALBG) was from 1892 in La Palma, Jalisco (collected by M. E. Jones, collection number 110).
Oxalidaceae	
<i>Oxalis pes-caprae</i> L.	Non-controversial native area. It is native and endemic to South Africa (Peirce 1997; Pyšek et al. 2020). It forms wild-growing populations in Mexico (Rzedowski & Rzedowski 2005; Villaseñor & Espinosa-García 2004). The first herbarium record (UMO) was from 1969 in Altotonga, Veracruz (collected by F. Ventura, collection number 239).
Poaceae	
<i>Andropogon gayanus</i> Kunth	Non-controversial native area. It is native to southern Africa (Bowden, 1964; Welker et al. 2020; Pyšek et al. 2020). It has naturalized and forms large populations in Mexico (Sánchez-Ken 2019). The first herbarium record (MEXU) was from Jiutepec, Morelos in 1987 (collected by M. Quezada, collection number 1869).
<i>Cenchrus ciliaris</i> L.	The native region of this species is controversial. Some authors consider it to be native throughout the African continent and Asia (Goel et al. 2011; Kharrat-Souissi et al. 2014). However, the number of herbarium records is higher in central and southern Africa. This coincides with the native distribution area reported by Pyšek et al. (2020), and both Germishuizen & Meyer (2003) and SANBI (2016) consider it native, so we classified it to be native to southern Africa. It has been present in Mexico (Villaseñor & Espinosa-García 2004) for more than 50 years, where it forms large wild populations, especially in the north of the country. The first herbarium record (TEX) was from Tampico, Tamaulipas in 1956 (collected by F. Martínez, collection number 1703).
<i>Digitaria eriantha</i> Steud.	Non-controversial native area. It is native to southern Africa (Van Oudtshoorn 2009; Fish et al. 2015) and introduced and naturalized in Mexico (Sánchez-Ken 2019). The first herbarium record (TAES) was from 1972 in Chiapas (collected by D. E. Breedlove, without collection number).
<i>Digitaria milanjiana</i> (Rendle) Stapf	Non-controversial native area. It is native to southern Africa (Fish et al. 2015), introduced and naturalized in Mexico (Sánchez-Ken 2019). The first herbarium record (MEXU) was from 1935 in Yauhtepec, Morelos (collected by G. Gándara, without collection number).
<i>Echinochloa colona</i> (L.) Link	There is much controversy in the literature on the origin and native region of this species. Although some authors referred to it as native to India (Fish et al. 2015) or Europe (Rzedowski & Rzedowski 2004), Pyšek et al. (2020) mentioned this species as native to South Africa. Van Oudtshoorn (2009), based on historical and ecological data, considers that it is native to southern Africa and it seems to have dispersed long ago throughout the tropical regions of the Old World; Germishuizen & Meyer (2003) coincide that it is native. The first herbarium record (MEXU) was from 1898 in Saltillo, Coahuila (collected by E. Palmer, collection number 508).
<i>Echinochloa pyramidalis</i> (Lam.) Hitchc. & Chase	It is a native species of central and southern Africa (Denny 1993; Van Oudtshoorn 2009; Pyšek et al. 2020). It has naturalized and formed wild populations in Mexico (Villaseñor & Espinosa-García 2004; López-Rosas et al. 2019). The first herbarium record (MEXU) was from 1969 in Las Choapas, Veracruz (collected by G. Martínez-Calderón, collection number 2041).
<i>Ehrharta erecta</i> Lam.	Non-controversial native area. It is native and endemic to South Africa (Mc Intyre and Ladiges 1985) and has recently been introduced to Mexico, where it forms wild populations (Sánchez-Ken 2019; Vigosa-Mercado 2020). The first herbarium record (SD) was from 2007 in Ensenada, Baja California (collected by F. Casillas, collection number 86).
<i>Eragrostis ciliaris</i> (L.) R.Br.	Non-controversial native area. It is native to southern Africa (Van Oudtshoorn 2009; Pyšek et al. 2020). It has naturalized and formed wild populations in Mexico (Espinosa-García & Villaseñor 2017). The first herbarium record

	(MEXU) was from 1984 in Acapulco, Guerrero (collected by N. Noriega, collection number 47).
<i>Eragrostis curvula</i> (Schrad.) Nees	Non-controversial native area. It is native to southern Africa (Fish et al. 2015; Wang et al. 2017; Pyšek et al. 2020). It has naturalized and formed large wild populations in Mexico (Villaseñor & Espinosa-García 2004). The first herbarium (MICH) record was from 1959 in Saltillo, Coahuila (collected by F. W. Gould, collection number 8694).
<i>Eragrostis echinocloidea</i> Stapf	Non-controversial native area. It is native to southern Africa (Van Oudtshoorn 2009; Fish et al. 2015). Although recently introduced to Mexico, it has already become naturalized (Espinosa-García & Villaseñor 2017). The first herbarium record (MEXU) was from 2001 in Magdalena de Quino, Sonora (collected by T. R. van Devender, collection number 626). It apparently arrived from Arizona, where it was introduced first.
<i>Eragrostis lehmanniana</i> Nees	Non-controversial native area. It is native to southern Africa (Van Oudtshoorn 2009; Fish et al. 2015; Pyšek et al. 2020). It is present and naturalized in Mexico (Villaseñor & Espinosa-García 2004), mostly in the arid zones and ranching areas of northern Mexico. The first herbarium record (MEXU) was from 1976 in Chihuahua, Chihuahua (collected by M. S. González, collection number 786).
<i>Eragrostis superba</i> Peyr.	Non-controversial native area. It is native to central and southern Africa (Van Oudtshoorn 2009; Fish et al. 2015). It has been present and naturalized for some decades in Mexico (Villaseñor & Espinosa-García 2004). The first herbarium record (KANU) was from 1962 in Apodaca, Nuevo León (collected by A. Robinson, collection number 1716). This species was initially introduced to the United States.
<i>Eragrostis viscosa</i> (Retz.) Trin. (= <i>Eragrostis amabilis</i> (L.) Wight & Arn.)	Non-controversial native area. It is native to central and southern Africa (Van Oudtshoorn 2009; Fish et al. 2015). It was introduced and naturalized in Mexico (Sánchez-Ken 2019). The first herbarium record (MICH) was from 1910 in Tuxpan, Colima (collected by C. R. Orcutt, collection number 5484).
<i>Hyparrhenia cymbaria</i> (L.) Stapf	Non-controversial native area. It is native to eastern and southern Africa (Van Oudtshoorn 2009). It has been recently introduced and is naturalized in Mexico (Vibrans et al. 2014), already forming large populations in the western regions. The first herbarium record (MEXU) was from 2011 in Yurecuaro, Michoacán (collected by H. Vibrans, collection number 8413).
<i>Hyparrhenia hirta</i> (L.) Stapf	Non-controversial native area. It is native to eastern and southern Africa (Van Oudtshoorn 2009). Some authors reported it as native to the Mediterranean, but it was probably introduced there a long time ago (Chejara et al. 2015). It has been present and naturalized for more than 130 years in Mexico. The first herbarium record (TAES) was in 1888 in Nuevo León (collected by C. G. Pringle, collection number 1967).
<i>Hyparrhenia rufa</i> (Nees) Stapf	Non-controversial native area. It is native to central and southern Africa (Pyšek et al. 2020) and naturalized in Mexico (Dávila et al. 2018). The first herbarium record (MEXU) was from 1963 in Veracruz (collected by G. S. McKee, collection number 10980).
<i>Hyparrhenia variabilis</i> Stapf	Non-controversial native area. It is native to eastern and southern Africa (Fish et al. 2015). It is a recent introduction and is becoming naturalized in Mexico (Vibrans et al. 2014). The first herbarium record (MEXU) was in 2006 in Tlacotepec, Morelos (collected by R. Cerros-Tlatilpa, collection number 2693).
<i>Hyperthelia dissoluta</i> (Nees ex Steud.) Clayton	Non-controversial native area. It is native to central and southern Africa (Van Oudtshoorn 2009; Fish et al. 2015). It is currently present, naturalized, and its populations are expanding in Mexico (Villaseñor & Espinosa-García 2004). The first herbarium record (USF) was from 1910 in Alzada, Colima (collected by A. S. Hitchcock, collection number 276).
<i>Megathyrsus maximus</i> (Jacq.) B.K.Simon & S.W.L.Jacobs	Non-controversial native area. It is native to central and southern Africa (Van Oudtshoorn 2009; Pyšek et al. 2020). It is present, naturalized and abundant in tropical Mexico (Villaseñor & Espinosa-García 2004). The first herbarium record

(= <i>Panicum maximum</i> Jacq.)	(MEXU) was from 1931 in Campeche (collected by C. L. Lundell, collection number 968).
<i>Melinis minutiflora</i> P.Beauv.	Non-controversial native area. It is native to central and southern Africa (Pyšek et al. 2020). It is naturalized in Mexico (Villaseñor & Espinosa-García 2004) and forms large populations. The first herbarium record (MEXU) was from 1953 in Tlataya, Mexico (collected by E. Matuda, collection number 30008).
<i>Melinis repens</i> (Willd.) Zizka (= <i>Rynchelytrum repens</i> (Willd.) C. E. Hubb.)	Non-controversial native area. It is native to central and southern Africa (Van Oudtshoorn 2009; Pyšek et al. 2020). In Mexico it is naturalized (Sánchez-Ken 2019) where it is considered an invasive species. It has been present for more than 90 years. The first herbarium record (MICH) was in 1927 from Mazatlán, Sinaloa (collected by I. Mexía, collection number 1944).
<i>Setaria sphacelata</i> (Schumach.) Stapf & C.E.Hubb. ex Moss	Non-controversial native area. It is native to central and southern Africa (Fish et al. 2015). It is naturalized in Mexico (Villaseñor & Espinosa-García 2004). The first herbarium record (MEXU) was from 1965 in Tuxtepec, Oaxaca (collected by G. Martínez, collection number 141).
<i>Tricholaena monachne</i> (Trin.) Stapf & C.E.Hubb. (= <i>Panicum coloratum</i> L.)	Non-controversial native area. It is native to eastern and southern Africa (Fish et al. 2015). Van Oudtshoorn (2009) initially distinguished between <i>T. monachne</i> and <i>P. coloratum</i> as separate species; however, <i>P. coloratum</i> is now regarded as a synonym of the former. It is naturalized in Mexico (Espinosa-García & Villaseñor 2017). The first herbarium record (MEXU) was from 1986 in Aguascalientes, Aguascalientes (collected by E. Esparza-Lugo, collection number 88).
Xanthorrhoeaceae	
<i>Kniphofia uvaria</i> (L.) Oken	Non-controversial native area. It is native to South Africa (Codd 1968). It is present in Mexico (Villaseñor & Espinosa-García 2004) where it occasionally forms wild populations in some parts of the country. The first herbarium record (MICH) was from 1941 in Lerma, Mexico (collected by H. M. Chute, collection number 72).

Supplementary Material 2. South African native species that are present in Mexico, but for which no evidence for wild-growing populations in Mexico was found. Uses: F= food, M= medicinal, O= ornamental.

Botanic family	Scientific name	Native Region (NR)	Native Region Reference	Uses in Mexico
Amaryllidaceae	<i>Agapanthus africanus</i> (L.) Hoffmanns.	South Africa	Younis et al. 2022	O
Amaryllidaceae	<i>Amaryllis belladonna</i> L.	South Africa	Dennehy et al. 2021	O
Amaryllidaceae	<i>Tulbaghia violacea</i> Harv.	South Africa	Reinten et al. 2011	O
Aizoaceae	<i>Lampranthus coccineus</i> (Haw.) N.E.Br.	South Africa	Klak et al. 2013; Klak et al. 2017	O
Aizoaceae	<i>Lampranthus multiradiatus</i> (Jacq.) N.E.Br.	South Africa	Klak et al. 2024	O
Aizoaceae	<i>Malephora crocea</i> (Jacq.) Schwantes	South Africa	Ferren et al. 1981	O
Apocynaceae	<i>Carissa macrocarpa</i> (Eckl.) A.DC.	South Africa	Lim 2014	F O
Araceae	<i>Zantedeschia elliotiana</i> (W.Watson) Engl.	South Africa	Reinten et al. 2011	O
Asparagaceae	<i>Asparagus setaceus</i> (Kunth) Jessop	South Africa	Germishuizen & Meyer 2003	O
Asparagaceae	<i>Chlorophytum capense</i> (L.) Voss	South Africa	Germishuizen & Meyer 2003	O
Asparagaceae	<i>Chlorophytum comosum</i> (Thunb.) Jacques	South Africa	Obermeyer 1962; Wang et al. 2011	O
Bignoniaceae	<i>Kigelia africana</i> (Lam.) Benth.	Central and southern Africa	Gabriel & Olubunmi 2009	O M
Campanulaceae	<i>Lobelia erinus</i> L.	South Africa	Muchuku et al. 2020	O
Cucurbitaceae	<i>Citrullus lanatus</i> (Thunb.) Matsum. & Nakai	South Africa	Pyšek et al. 2020	F
Geraniaceae	<i>Pelargonium graveolens</i> L'Hér.	South Africa	Reinten et al. 2011	O
Geraniaceae	<i>Pelargonium peltatum</i> (L.) L'Hér.	South Africa	Reinten et al. 2011	O
Geraniaceae	<i>Pelargonium zonale</i> (L.) L'Hér.	South Africa	Reinten et al. 2011	O
Iridaceae	<i>Crocasmia aurea</i> (Pappe ex Hook.) Planch.	South Africa	Germishuizen & Meyer 2003	O M
Iridaceae	<i>Dietes grandiflora</i> N.E.Br.	South Africa	Germishuizen & Meyer 2003	O
Iridaceae	<i>Freesia refracta</i> (Jacq.) Klatt	South Africa	Germishuizen & Meyer 2003	O
Lamiaceae	<i>Plectranthus verticillatus</i> (L.f.) Druce	South Africa	Reinten et al. 2011	O
Plumbaginaceae	<i>Plumbago auriculata</i> Lam.	South Africa	Chen et al. 2021	O
Strelitziaceae	<i>Strelitzia reginae</i> Banks	South Africa	Reinten et al. 2011	O

Supplementary Material 3. Species present in Mexico that are considered by the South African National Biodiversity Institute (SANBI) to be native to South Africa but have a ‘native’ distribution that extends beyond sub-Saharan Africa; the available literature does not allow the determination of a more circumscribed native region or region of origin.

Scientific name	Possible native region	Comments
Commelinaceae		
<i>Commelina benghalensis</i> L.	Tropical Asia and Africa	Distributed and considered native to tropical and subtropical areas of Africa and Asia (Webster et al. 2005). Although South Africa is included in this region, its supposedly native range extends beyond the Sahara Desert.
<i>Commelina diffusa</i> Burm.f.	Africa and Asia	It is native to Africa and Asia (probably India) based on historical and ecological records (Brashier 1966; Hassemer 2018), but no further information is available.
Convolvulaceae		
<i>Ipomoea cairica</i> (L.) Sweet	Africa and Asia	It was considered by Pyšek et al. (2020) to be native to South Africa. However, other authors report that it is native to tropical regions of Africa but also to China and neighboring areas (Liu et al. 2012; 2016). Recent phylogenetic analyses showed that <i>I. cairica</i> diverged from <i>I. aquatica</i> 8.7 million years ago, and its origin is probably Asian (Hao et al. 2021; Jiang et al. 2022). It is not known how long ago it arrived in South Africa.
Cyperaceae		
<i>Cyperus papyrus</i> L.	Africa	It is considered to be a species native to the African continent (Kern 1974; Acevedo-Rodríguez and Strong 2012; Van Dam et al. 2014) and has large populations in Eastern Africa; however, the distribution extends to the Mediterranean region. SANBI considers it native, but Pyšek et al. (2020) does not. There is no further information.
Fabaceae		
<i>Alysicarpus vaginalis</i> (L.) DC.	Tropical Asia and Africa	This species is present and considered native to the tropics in the Old World, both in Africa and Asia (Pedley 2001; Gholami et al. 2020). No more specific data are available.
<i>Sesbania sesban</i> (L.) Merr.	Africa and Asia	This species is considered native to tropical Africa and Asia (Negawo et al. 2023). No more specific data are available.
Lamiaceae		
<i>Ocimum americanum</i> L.	África and Asia	Paton (1992), in a taxonomic synopsis, considers the species native to wide regions of Africa and Asia, and introduced to Europe and Australia. Paton et al. (2004) confirm that the species was originated in tropical Asia and probably migrated to Africa long time ago based on genetic data.
Poaceae		
<i>Bothriochloa bladhii</i> (Retz.) S.T.Blake	Central and Southern Africa, Central Asia	It is considered native to central and southern Africa, but also beyond the southern Sahara to North Africa and regions of central Asia (McKenzie & Noble 1990). No more specific data are available.
<i>Moorochloa eruciformis</i> (Sm.) Veldkamp	Africa and Asia	The distribution reported as native ranges from southern to northern Africa, and from there to parts of Asia such as

<i>(Brachiaria eruciformis (Sm.) Griseb.)</i>		China and Indonesia (Van Oudtshoorn 2009; Menioui 2021). No more specific data are available.
<i>Chloris gayana</i> Kunth	Africa, India, China	Pyšek et al. (2020) reported this species as native to South Africa. However, its reported native distribution goes beyond the Sahara Desert. It is also considered native to India and China (Van Oudtshoorn 2009; Negawo et al. 2021).
<i>Chloris virgata</i> Sw.	Africa and Asia	There is much controversy in the literature on the native region of this species. In POWO (2024), it is considered as native to the tropical regions of America, however, Van Oudtshoorn (2009) and Pyšek et al. (2020) include South Africa as a part of its native region. Anderson (1974) notes much morphological variation in the Old-World specimens - also outside of Africa, but more uniform characters in the American specimens. His map shows a concentration of specimens in Eastern and Southern Africa, which might be an indication of its native area. However, we suggest that without genetic studies, we cannot state that it is an African species. We do coincide with other authors that it is an introduced and naturalized species in Mexico (Villaseñor & Espinosa-García 2004; Cerros-Tlatilpa et al. 2015).
<i>Cynodon dactylon</i> (L.) Pers.	Africa and Asia	Pyšek et al. (2020) reported this species as native to South Africa. It appears to have a wide native distribution in Africa and Asia (Van Oudtshoorn 2009). On the other hand, Wu (2011) reported it as native to India. No more specific data are available
<i>Dichanthium annulatum</i> (Forssk.) Stapf	Africa and the Mediterranean	Its native distribution extends beyond Africa to the Mediterranean area (Van Oudtshoorn 2009; Fish et al. 2015). No more specific data are available.
<i>Digitaria ternata</i> (A.Rich.) Stapf	Africa and Asia	It is reported as native to the African continent, except for the northern part, and parts of Asia (Hovenden & Morris 2002; Van Oudtshoorn 2009). No more specific data are available.
<i>Digitaria velutina</i> (Foorssk.) P.Beauv.	East and North Africa	The reported native distribution extends beyond the Sahara, and includes northern Africa (Van Oudtshoorn 2009; Fish et al. 2015).
<i>Eleusine coracana</i> (L.) Gaertn.	Africa and Asia	It is reported as native to the African continent, except for the northern part, and is also reported as native to Asia (Van Oudtshoorn 2009; Fish et al. 2015). No more specific data are available. No more specific data are available.
<i>Enneapogon desvauxii</i> P.Beauv.	Africa and Asia	The native region of this species is highly controversial. In POWO (2024) it is considered native in North and South America, Africa, and Asia. Several American Floras and the PLANTS database (https://plants.usda.gov/plant-profile/ENDE) consider it native in North America, whereas Germishuizen & Meyer (2003) record it as native in South Africa. However, Pyšek et al. (2020) did not include it in their list of South African species that are invasive elsewhere. The genetic evidence of the Eragrostideae tribe suggests an early origin in Australia or Africa and then radiation to other parts (Peterson et al. 2010; Liu et al. 2021). More data are needed to determine the region of origin and nativeness of this species.

<i>Eragrostis viscosa</i> (Retz.) Trin.	Central and Southern Africa, India	Its reported native distribution extends beyond southern Africa to India (Fish et al. 2015). No more specific data are available.
<i>Eragrostis tenuifolia</i> (A. Rich.) Hochst. ex Steud.	Africa, India, China	It is native throughout the African continent and ranges as far as regions of southern Asia (Fish et al. 2015). No more specific data are available.
<i>Hemarthria altissima</i> (Poir.) Stapf & C.E.Hubb.	Africa	It is considered native to the African continent, but also to the Mediterranean region and parts of Asia (Edgar & Shand 1987; Van Oudtshoorn 2009; Huang et al. 2014).
<i>Heteropogon melanocarpus</i> (Elliott) Benth.	Africa	It is considered native to the entire African continent, including regions north of the Sahara (Fish et al. 2015); POWO marks the entire tropics (including America) as native region. No more specific data are available.
<i>Imperata cylindrica</i> (L.) Raeusch.	Africa and Asia	The native region of this species is controversial. POWO (2024) shows all of Africa, the Mediterranean and Western Asia as native regions. In a publication on its biology and ecology, the author describes different regions with presence of the species, but did not make a difference between the native or introduced range (MacDonald 2004). Some taxonomists have divided the species into several varieties from various continents (Garrity et al. 1996), but these are not always accepted or segregated as separate species. Pyšek et al. (2020) consider it is native to southern Africa, but given its widespread distribution and variation, we consider its native region unresolved.
<i>Paspalum scrobiculatum</i> L.	Africa and Asia	It is reported to be native to India (de Wet et al. 1983), however, other authors consider it native throughout Africa and Asia (Van Oudtshoorn 2009). No more specific data are available.
<i>Stenotaphrum secundatum</i> (Walter) Kuntze		The origin and native area of this species is controversial; it is possible that it originated in the western Indian Ocean and dispersed in pre-columbian times to tropical America; it is highly variable genetically (Sauer 1972; Mullen & Shelton 1996). Some sources consider it native to tropical Africa (Sauer 1972; Germishuizen & Meyer 2003; Trytsman et al. 2021) although other authors suggested that it is native to North America (Van Oudtshoorn 2009). SANBI considers it native, but we consider it prudent to classify this species in Group 3.
<i>Tragus berteronianus</i> Schult.	Africa and Asia	It is native to Africa. Its distribution extends north beyond the Sahara (Anton 1981; Acevedo-Rodríguez & Strong 2012).
<i>Urochloa panicoides</i> P.Beauv.	Central and East Africa	Its reported native distribution extends beyond the Sahara to western and southern Asia (Morrone & Zuloaga 1992; Torres Gonzalez & Morton 2005). No more specific data are available.

Supplementary Material 4. Species present in Mexico that are considered to be native to South Africa by the South African National Biodiversity Institute (SANBI), but the literature indicates a different native region.

Scientific name	Native region	Comments
Amaranthaceae		
<i>Achyranthes aspera</i> L.	Southeast Asia	Some authors consider it to be a pantropical species (De Lange et al. 2004). According to Sharma and Chaudhary (2015) this species is native to southeast Asia, based on historical data.
<i>Atriplex patula</i> L.	Europe	This species is found on all continents. It was introduced in America in the 19th century and is probably native to halophytic vegetation regions of Europe, based on ecological and historical data (Bassett & Munro 1987).
Apiaceae		
<i>Centella asiatica</i> (L.) Urb.	Southeast Asia	POWO (2024) reports it as native in different regions in Africa, Asia, and Oceania. The literature mainly reports several countries of Southeast Asia as its native region (Chandrika & Prasad Kumara 2015). There are also reports as native in other regions including the southern United States and other parts of the Americas, Madagascar, and South Africa (Acevedo-Rodríguez and Strong 2012; Chandrika & Prasad Kumara 2015), all without giving reasons for the assessment.
Araceae		
<i>Spirodela polyrhiza</i> (L.) Schleid.	North America	Fossil evidence shows that it is native in North America (Jacobs 1947).
Araliaceae		
<i>Hydrocotyle bonariensis</i> Comm. ex Lam.	South America	It was reported as native to Mexico by Villaseñor (2016). However, the literature suggests that it is native to South America, specifically Argentina (Mazumdar et al. 2022) based on historical data and where it was first described. POWO (2024) reports it as introduced in South Africa.
Asteraceae		
<i>Cotula australis</i> Hook.f.	Oceania	It is native to Oceania based on historical records (Kloot 1985; Shabbir & Mujahid 2017). A recent article on the introduction of this species in Morocco indicates that in addition to Oceania, it is also native to Madagascar and South Africa (Jbilou et al. 2023), based, however, on POWO without a critical evaluation.
Ceratophyllaceae		
<i>Ceratophyllum demersum</i> L.	Denmark	It is native to Denmark. Fossil evidence supported the idea of a native species in different regions of the Americas, Europe, Africa, and Australia (Wilmot-Dear 1985), but recent genetic analyses place Denmark as the area of origin and thus the center of the native region (Hyldgaard et al. 2017). However, Pyšek et al. (2020) still considers the species as native to South Africa. Aquatic plants sometimes travel naturally with migrating birds, but more evidence is necessary.
Cucurbitaceae		
<i>Lagenaria siceraria</i> (Molina) Standl.	North Africa	This species is distributed throughout the tropics, possibly travelling by flotation. Although it has sometimes been thought to be native to the Americas and may have a pre-

		columbian history in the continent (Erickson et al. 2005), it appears to have originated in North Africa based on genetic data (Decker-Walters et al. 2004). More data are needed.
Cyperaceae		
<i>Cyperus difformis</i> L.	Asia	It is native to the tropical regions of Asia (Lipscomb 1980).
<i>Cyperus imbricatus</i> Retz. (<i>Cyperus digitatus</i> Roxb.)	India and South China	It is considered a pantropical species. Some authors suggest that its native range is India and southern China although they do not specify their reasons (Kern 1974; Prasad & Simpson 2011).
<i>Cyperus distans</i> L.f.	India	It is considered a pantropical species, probably native to India (Kern 1974; Tucker 1982).
<i>Cyperus iria</i> L.	Eurasia	It is a species native to the Old World, mainly Europe and Asia (Chauhan & Johnson 2009; Palermo & Curtin 2017). No further information is available.
<i>Cyperus rotundus</i> L.	India	It is a pantropical species, probably native to India (Kern 1974; Peerzada 2017). It appears to have had an early introduction to all South Asia and the African continent. Thus Pyšek et al. (2020) considered it to be native to South Africa. We propose that more information is needed.
<i>Fuirena umbellata</i> Rottb.	Tropical Africa and Asia	This species is considered as native in the tropical regions of Asia and Africa (Tiwari & Shukla 2013). It occurs in South Africa, but there is no evidence in the literature that it is native to the region.
Euphorbiaceae		
<i>Euphorbia tirucalli</i> L.	Madagascar	It is a species native to Madagascar, based on genetic data (Barres et al. 2011). Other authors report it as native to East Africa (Mali & Panchal 2017), however they do not explain the reasons.
Fabaceae		
<i>Abrus precatorius</i> L.	Tropical Africa and Asia	It is considered native to tropical Africa and Asia (Ross 2003).
<i>Chamaecrista absus</i> (L.) H.S.Irwin & Barneby	India and Sri Lanka	This is a species present in tropical regions worldwide, but is considered native to India and Sri Lanka (Ahmad et al. 2017)
<i>Crotalaria pallida</i> Aiton	Central Africa	The species is native to the Paleotropics, probably originating in central Africa. This region is considered as a center of the species diversity (Ninkaew et al. 2017).
<i>Indigofera hirsuta</i> L.	India	It is native to the Indian plains (Duke 1981).
<i>Indigofera spicata</i> Forssk.	Central Africa and South Asia	Its native distribution covers part of the African continent, (except for Southern and North Africa) and part of southern Asia (Duke 1981).
<i>Indigofera tinctoria</i> L.	Malaysia	It is native to the Malay Archipelago (Duke 1981). It is occasionally found in Africa.
<i>Lablab purpureus</i> (L.) Sweet	India	It is native to India and Southeast Asia (Duke 1981).
<i>Vigna unguiculata</i> (L.) Walp.	India	It is native to India and was introduced long ago to regions such as Arabia and Africa where it has been an important part of the agricultural systems in the African savannah (Duke 1981).
Nyctaginaceae		
<i>Boerhavia coccinea</i> Mill.	Central America	This species is cosmopolitan, but considered native to the Neotropics (Acevedo-Rodríguez & Strong 2012; Struwig

		& Siebert 2013). POWO (2024) marks it as introduced in South Africa.
Orchidaceae		
<i>Eulophia maculata</i> (Lindl.) Rchb.f. (<i>Oeceoclades maculata</i> (Lindl.) Lindl.)	Central Africa and Madagascar	It is a species native to the tropical zones of central Africa and Madagascar (Cohen & Ackerman 2009). POWO (2024) does not include South Africa in its native range.
Plantaginaceae		
<i>Plantago lanceolata</i> L.	Europe	It is native to Europe (Alexander et al. 2012). POWO (2024) considers it as introduced in South Africa.
Poaceae		
<i>Cenchrus setaceus</i> (Forssk.) Morrone	North and East Africa	It is native to Africa, specifically to the northeastern part of the continent (Ferrer-Gallego & Boisset 2015). POWO (2024) considers it as introduced in South Africa.
<i>Eleusine indica</i> (L.) Gaertn.	India	Pyšek et al. (2020) reported this species as native to South Africa. However, other authors indicate that it is native to India (Fish et al. 2015). The subspecies reported from South Africa (<i>E. indica</i> subsp. <i>africana</i>) is now a synonym of <i>E. coracana</i> (Van Oudtshoorn 2009).
<i>Hackelochloa granularis</i> (L.) Kuntze	South Asia	The species is native to southern Asia (Arthan et al. 2016).
<i>Rottboellia cochinchinensis</i> (Lour.) Clayton	East Asia	It is native to East Asia (Welker et al. 2020).
<i>Schismus barbatus</i> (L.) Thell.	Mediterranean	It is native to the Mediterranean region (Pucheta et al. 2011).
<i>Setaria verticillata</i> (L.) P.Beauv.	Asia	It is native to temperate regions of Asia (Kellogg 2017), even though Pyšek et al. (2020) mentions this species as native to South Africa. Van Oudtshoorn (2009) indicates a distribution in the Old World.
Polygonaceae		
<i>Rumex conglomeratus</i> Murray	Europe	It is native to the European continent (Costan 2023).
Potamogetonaceae		
<i>Potamogeton crispus</i> L.	Eurasia	It has a wide native distribution spanning Europe and Asia (Stuckey 1979).
Rubiaceae		
<i>Pentodon pentandrus</i> (Schumach. & Thonn.) Vatke	Central Africa to Arabian Peninsula	Some authors consider this species as native to the tropical zones of central Africa and the Arabian Peninsula (Rogers 1987; Karehed et al. 2008; Adesipo et al. 2020). It is unclear if its native range includes South Africa; the authors do not mention it explicitly and POWO (2024) does not include South Africa in its native range.
Sphenocleaceae		
<i>Sphenoclea zeylanica</i> Gaertn.	South Asia	It is native to southern Asia (Carter et al. 2014).
Zygophyllaceae		
<i>Tribulus terrestris</i> L.	North Africa	Some authors consider it native to North Africa (Evstatieva & Tchobanov 2011). From that region it dispersed to different areas of Africa, the Mediterranean and southern Europe, where it was also considered native in different sources (Pyšek et al. 2020). A query of occurrence records in GBIF shows the abundant occurrence of the species in northern and central Africa.

Supplementary Material References

Supplementary Material 1

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Supplementary Material 2

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