

**В.В. Бялт*, М.В. Коршунов. НОВЫЕ ДРЕВЕСНЫЕ
ЭРГАЗИОФИГОФИТЫ ФЛОРЫ ФУДЖЕЙРЫ (ОАЭ)**

**V.V. Byalt*, M.V. Korshunov. NEW WOODY ERGASIOPHYTOPHYTES
OF THE FLORA OF FUJAIRAH EMIRATE (UAE)**

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The United Arab Emirates is located in the tropical desert zone, which leaves a serious imprint on the composition of the country's cultivated flora. Most alien plant species are grown on irrigation and die very quickly without it. We studied the flora of the emirate in 2017–2020 and focused on alien element in 2019–2020. Ergasiophygophytes, i.e. cultivated plants that has escaped into the wild, are significant part of the alien flora in various regions (DAISIE, 2009; Pyšek et al., 2017; Kleunen et al., 2018; Mayorov et al., 2019). Monitoring of this fraction of the regional flora is undoubtedly essential in modern times. Herbarium specimens were transferred to MW, the duplicates are kept in LE and Fujairah Scientific Herbarium. The collectors are the authors of the article (V.B., M.K.), unless otherwise specified. The species first reported for the emirate are marked with an asterisk (*); the species first reported for the UAE are marked with two asterisks (**). The following species of flowering plants are new to Fujairah: *Ruellia simplex* C. Wright, *Catharanthus roseus* (L.) G. Don, *Albizia lebbek* (L.) Benth., *Leucaena leucocephala* (Lam.) De Wit, *Parkinsonia aculeata* L., *Pithecelobium dulce* (Roxb.) Benth., *Azadirachta indica* A. Juss., *Melia azedarach* L.

***Ruellia simplex* C. Wright: 1) 25°36'9.81" N, 56°16'41.30" E, Al Dibba town, Al Shams Nursery, near Dibba Theatre (0.1 km to East), 6 m a.s.l.: weed (running wild) in plant market and nursery, drainage outlet near accommodation, 28.IV 2020, V.B., M.K. 2505 (LE); 2) 25°36'9.81" N, 56°16'41.30" E, Al Dibba town, Al Shams Nursery, near Dibba Theatre (0.1 km to East). 6 m a.s.l.: weed in plant market and nursery, between pots, 28.IV 2020, V.B., M.K. 2546, 2485 (LE); 3) 25°36'5.21" N, 56°15'45.67" E, Emirate of Sharjah, Khor-Fakkan, the park opposite of hotel "Oceanic": weed (run wild) among the plantings, 29.IV 2020, M. K. s.n. (LE); 4) 25°36'5.21" N, 56°15'45.67" E, Al Dibba town, Green Oasis Nursery, 0.6 km South-West from Street Number 35, or 0.8 km North from Federal Electricity & Water Authority, 10 m a.s.l.: weed (running wild) in the pots and between pots, on irrigation in plantation, common, 3.V

2020, V.B., M.K. 2626 (LE); 5) 25°25'24.70" N, 56°20'18.77" E, Al Bidiya, Al Qalamoon Nursery, 0.3 km East from Eid Prayer Ground Bidyah, 22 m a.s.l.: weed (run wild) in and between plastic pots with cultivated plants and between irrigated lines, 15.V 2020, V.B., M.K. 2950 (LE, FSH); 6) 25°25'15.85" N, 56°20'27.64" E, Al Bidiya, Abu Khalid agricultural nursery. 0.3 km to South from Eid Prayer Ground Bidyah, 18 m a.s.l.: run wild between plastic pots with cultivated plants, 12.V 2020, V.B., M.K. 2920f (LE, FSH); 7) 25°17'28.28" N, 56°6'48.62" E, Fujairah Emirate, Masafi Friday market, E88 Al Dhaid – Masafi road, 5.2 km to Masafi. 370 m a.s.l.: run wild on irrigation, on sand, 2.VI 2020, V.B., M.K. (LE); 8) 25°26'9.06" N, 56°20'17.72" E, Al Bidiya, Desert Oasis Nursery Bidyah, 0.7 km West from Bidyah Association for Culture and Folklore, 14 m a.s.l.: run wild on paths between irrigated lines, 4.VI 2020, V.B., M.K. 3402 (LE, FSH); 9) 25°36'19.87" N, 56°17'0.48" E, Al Dibba town, plant nursery "Corniche Nursery", 0.4 km South-West by road from roundabout between Corniche Street 101 and Sambraid Beach road, 3 m a.s.l.: run wild in and between plastic pots with cultivated plants, 19.VI 2020, V.B., M.K. 3700 (LE, FSH). – *Ruellia simplex* C. Wright is widely cultivated on flower gardens and in border plantings in Fujairah, while bearing fruit and constantly self-seeding, usually on irrigation, but not only. In plant nurseries, it could be found as a weed plant and almost in each of them. Previously not cited as an alien (ergasiophygophyte) for Fujairah, UAE and Arabia. Absent in Arabian Floras and Checklists (Colenette, 1989; Cornes, Cornes, 1989; Migahid, 1989; Wood, 1997; Jongbloed, 2003; Karim, Fazwi, 2007; Ghazanfar, 2007; Norton, 2009, etc.).

***Catharanthus roseus* (L.) G. Don: 1) 25°8'30.90" N, 56°21'17.35" E, Al Fujairah city, villas south from Umbrella beach, gardens and villas near Al Sharqi Medical Centre, 4 m a.s.l.: run wild near garden wall, 18.IV 2020, M. K. s.n., (LE); 2) 25°22'30.68" N, 56°20'41.51" E, Sharjah Emirate, Khorfakkan, waste water channel on the north of Khorfakkan town, E99 Rugaylat road, near Oceanic Khorfakkan Resort & Spa, 10 m a.s.l.: on

channel banks, near villa walls, 23.IV 2020, V.B., M.K. 2371 (LE); 3) 25°16'46.11" N, 56°21'28.88" E, Fujairah Emirate, Mirbah town, 0.3 km West from Comprehensive Police Station Murbah, 19 m a.s.l.: shady lane, run wild near irrigated circles, 23.IV 2020, V.B., M.K. 2403 (LE); 4) 25°35'47.57" N, 56°15'32.82" E, Al Dibba town, drainage channel with mango plantation in it, 0.4 km North-West from Federal Electricity & Water Authority, 13 m a.s.l.: weed in irrigation circle, in a shady lane, 2.V 2020, V.B., M.K. 2587 (LE); 5) 25°34'24.07" N, 56°14'6.39" E, Al Dibba town, private nurseries, 0.2 km South from Al Amerey Nursery, 48 m a.s.l.: seedlings in nursery, under date palms, 7.V 2020, V.B., M.K. 2727 (LE); 6) 25°25'59.12" N, 56°19'49.63" E, Al Bidya, small villas and gardens 0.9 km to West-North-West from Green Cost Nursery Bidiya plant selling. 38 m a.s.l.: run wild on the waste place near farm, 11.V 2020, V.B., M.K. (LE); 7) 25°25'55.03" N, 56°20'20.99" E, Al Bidya, near Green Cost Nursery Bidiya plant selling, 14 m a.s.l.: weed on roadside near wall of villa, 11.V 2020, V.B., M.K. 2852 (LE); 8) 25°25'15.85" N, 56°20'27.64" E, Al Bidiya, Abu Khalid agricultural nursery. 0.3 km to South from Eid Prayer Ground Bidiyah, 18 m a.s.l.: run wild without irrigation on abandoned land, 12.V 2020, V.B., M.K. 2894 (LE, FSH); 9) 25°29'58.80" N, 56°21'27.30" E, Al Aqah, near Masjid Saad Ben Moaz Mousqe, or 0.4 km East from Iberotel Miramar Al Aqah Beach Resort, 12 m a.s.l.: run wild in back street near wall of villa, 20.V 2020, V.B., M.K. 3134 (LE); 10) 25°32'15.63" N, 56°21'25.28" E, Rul Dadhna, near wall at E99 road, 0.5 km North from ADNOC Petrol Station on E99 Rugaylat road, 4 m a.s.l.: run wild near fence of villa, behind alpine hill, 23.V 2020, V.B., M.K. 3141 (LE, FSH); 11) 25°30'6.28" N, 56°21'30.01" E, Al Aqah, 14 m a.s.l.: 25°28'17.54" N, 56°21'8.03" E, in irrigation circle under palm tree, 26.V 2020, V.B., M.K. 3269 (LE, FSH); 12) 25°28'17.54" N, 56°21'8.03" E, Sharm, 10–45 m a.s.l.: near wall in shady side street between villas, 28.V 2020, V.B., M.K. 3359 (LE). – *Catharanthus roseus* (L.) G. Don widely cultivated on flower gardens and in border plantings in Fujairah, while bearing fruit and constantly self-seeding, usually on irrigation, sometimes could be found on roadsides and in shady alleys. Previously not cited as an alien (ergazifigophyte) for Fujairah, UAE and Arabia. Undoubtedly cultivated, it is absent from Arabian floras and checklists (Colenette, 1989; Cornes, Cornes, 1989; Migahid, 1989; Wood, 1997; Jongbloed, 2003; Karim, Fazwi, 2007; Ghazanfar,

2007; Norton, 2009 et al.). According to Karim & Dakheel (2006), it is cultivated in the UAE, on the coast of the Persian Gulf and in oases in Dubai, Abu Dhabi and Al Ain, grows under the straight sunlight and tolerates salinity well.

***Parkinsonia aculeata* L.: 1) 25°26'9.06" N, 56°20'17.72" E, Al Bidiya, Desert Oasis Nursery Bidiyah, 0.7 km West from Bidiyah Association for Culture and Folklore, 14 m a.s.l.: cultivated in plastic pot, 4.VI 2020, V.B., M.K. 3456 (LE, FSH); 2) 25°36'32.36" N, 56°16'39.21" E, Al Dibba town, plant nursery on the corner between Street Number 30 and Corniche Street 101, 6 m a.s.l.: run wild in and between plastic pots with cultivated plants, common, 16.VI 2020, V.B., M.K. 3662, 3668 (LE, FSH). – Alien species of American origin. Listed as an introduced species for 73 countries of the world (*Parkinsonia aculeata*..., 2020), including in most Arabian states. Listed as an invasive species in Australia (Randall et al., 2020) and many other countries. Cultivated in gardens, parks and roadsides in the UAE. Withstands salinity and survives harsh conditions (Karim, Dakheel, 2006), therefore it is more often grown in the lowland part of the emirates: Al Ain, Dubai, Abu Dhabi and Ras Al Khaimah. Fujairah has a large population of run wild *Parkinsonia aculeata* L. near gardens in Sharm, in an abandoned garden in the Mazafi area, actively self-seeds in some nurseries around plastic potted plants for sale as well.

***Albizia lebbbeck* (L.) Benth.: 1) 25°16'46.11" N, 56°21'28.88" E, Mirbah town, 0.3 km West from Comprehensive Police Station Murbah, 19 m a.s.l.: weed in irrigated circle near villa, 23.IV 2020, V.B., M.K. (LE); 2) ca. 25°36' N, 56°18' E, Dibba, 7 m a.s.l.: weed or naturalized plant in wasteland in place of an abandoned garden (or plant nursery), individual trees and self-seeding, 28.IV 2020, V.B., M.K. 2471 (WWNP, LE); 3) 25°36'5.21" N, 56°15'45.67" E, Fujairah Emirate, Al Dibba town, Green Oasis Nursery, 0.6 km South-West from Street Number 35, or 0.8 km North from Federal Electricity & Water Authority, 10 m a.s.l.: weed (running wild) on irrigation in plantation, 3.V 2020, V.B., M.K. 2666 (LE); 4) 25°34'24.07" N, 56°14'6.39" E, Al Dibba town, private nurseries, 0.2 km South from Al Amerey Nursery, 48 m a.s.l.: seedling in nursery, 7.V 2020, V.B., M.K. 2733 (LE); 5) 25°7'48.93" N, 56°21'19.49" E, Fujairah city, median strips and greenery landscaping near Fujairah International Marine Club. 4 m a.s.l.: run wild in side street, 9.V 2020, V.B., M.K. 2778, 2780 (LE); 6) 25°32'11.94" N, 56°21'4.36" E, Fujairah

Emirate, Rul Dadhna, Plant Nursery 1 km North-North-West from ADNOC Petrol Station on E99 Rugaylat road, 13 m a.s.l.: run wild in plant nursery between pots, on the path between rows of pots with cultivated plants, 23.V 2020, V.B., M.K. 3154 (LE); 7) 25°32'11.94" N, 56°21'4.36" E, Rul Dadhna, Plant Nursery of Abu Abdallah in 1 km North-North-West from ADNOC Petrol Station on E99 Rugaylat road, 13 m a.s.l.: wild in plant nursery between pots, on the path between rows of pots with cultivated plants, 23.V 2020, V.B., M.K. 3154 (LE, WWNP); 8) 25°26'9.06" N, 56°20'17.72" E, Al Bidiya, Desert Oasis Nursery Bidyah, 0.7 km West from Bidiyah Association for Culture and Folklore. 14 m a.s.l.: run wild in plastic pot and between pots; under tree, in shade, 4.VI 2020, V.B., M.K. 3453 (LE, WWNP); 9) 25°34'33.97" N, 56°14'6.15" E, Al Dibba town, Alamarey Nursery, 0.5 km South from Khalid Hadi Resort Dibba, 45 m a.s.l.: run wild in and between plastic pots with cultivated plants, 13.VI 2020, V.B., M.K. 3566 (LE, WWNP). – Alien species of South Asian origin (Pakistan, India, Bangladesh, Myanmar). Listed as an introduced species for 82 countries (*Albizia lebeck...*, 2020), including growing in most Arabian states (POWO, 2020). Listed as an invasive species in the United States of America (Kraus et al., 2020), Republic of South Africa (Robinson et al., 2020), United Mexican States (González Martínez et al., 2020) and many other. A cultivated, fast-growing plant, it provides excellent shade on the streets, in gardens and parks, while tolerating soil salinity well. Distributed in culture throughout the UAE (Karim, Dakheel, 2006), but has not been previously cited as an ergasiofygophyte (см. Western, 1989; Jongbloed, 2003; Karim, Fawzi, 2007 et al.). New alien species for Fujairah and the UAE.

**Leucaena leucocephala* (Lam.) De Wit: 1) 25°8'30.90" N, 56°21'17.35" E, Al Fujairah city, villas south from Umbrella beach, gardens and villas near Al Sharqi Medical Centre, 4 m a.s.l.: near garden wall, 18.IV 2020, M.V. Korshunov s.n. (LE); 2) 25°16'46.11" N, 56°21'28.88" E, Mirbah town, 0.3 km West from Comprehensive Police Station Murbah, 19 m a.s.l.: run wild in irrigated spots near villa wall, 23.IV 2020, V.B., M.K. 2405 (LE); 3) 25°36'9.81" N, 56°16'41.30" E, Al Dibba town, Al Shams Nursery, near Dibba Theatre (0.1 km to East). 6 m a.s.l.: weed or naturalized plant on sand in wasteland in place of an abandoned garden (or plant nursery), near garden wall without irrigation, 28.IV 2020, V.B., M.K. 2465 (FSH, LE); 4) 25°36'5.21" N, 56°15'45.67" E, Al Dibba town, drainage channel near to Green Oasis Nursery, 0.6 km South-West from Street Number 35, or 0.8 km

North from Federal Electricity & Water Authority, 10 m a.s.l.: in gravel-sand drainage channel, on the channel bank, 2.V 2020, V.B., M.K. 2624 (LE); 5) 25°36'0.77" N, 56°15'50.95" E, Al Dibba town, side streets between villas, 0.7 km South-South-West from Street Number 35, or North-North-East from Federal Electricity & Water Authority, 12 m a.s.l.: roadside, near shady wall, 2.V 2020, V.B., M.K. 2593 (LE); 6) 25°36'5.21" N, 56°15'45.67" E, Al Dibba town, Green Oasis Nursery, 0.6 km South-West from Street Number 35, or 0.8 km North from Federal Electricity & Water Authority, 10 m a.s.l.: weed (running wild) in on irrigation in plantation and near garden wall, 3.V 2020, V.B., M.K. 2673 (LE); 7) 25°34'24.07" N, 56°14'6.39" E, Al Dibba town, private nurseries, 0.2 km South from Al Amerey Nursery, 48 m a.s.l.: seedlings in nursery, 7.V 2020, V.B., M.K. 2711 (LE); 8) 25°25'55.03" N, 56°20'20.99" E, Al Bidya, near Green Cost Nursery Bidiya plant selling. 14 m a.s.l.: roadside near irrigation near garden wall, 11.V 2020, V.B., M.K. 2832 (LE); 9) 25°25'59.12" N, 56°19'49.63" E, Al Bidya, small villas and gardens 0.9 km to West-North-West from Green Cost Nursery Bidiya plant selling. 38 m a.s.l.: run wild on heaps of rotten manure at the farm, 11.V 2020, V.B., M.K. 2826 (LE); 10) 25°25'15.85" N, 56°20'27.64" E, Al Bidiya, Abu Khalid agricultural nurser, 0.3 km to South from Eid Prayer Ground Bidyah, 18 m a.s.l.: run wild under trees, in shade and between irrigated lines, 12.V 2020, V.B., M.K. s.n. (LE, FSH); 11) 25°25'24.70" N, 56°20'18.77" E, Al Bidiya, Al Qalamoon Nursery, 0.3 km East from Eid Prayer Ground Bidyah, 22 m a.s.l.: weed (run wild) under tree, in shade; and near fence without irrigation on abandoned land, 15.V 2020, V.B., M.K. 2960 (LE, FSH); 12) 25°29'58.80" N, 56°21'27.30" E, Al Aqah, near Masjid Saad Ben Moaz Mousqe, or 0.4 km East from Iberotel Miramar Al Aqah Beach Resort, 12 m a.s.l.: run wild in back street near fence, 20.V 2020, V.B., M.K. 3133 (LE); 13) 25°35'45.41" N, 56°16'36.48" E, Al Dibba town, 0.2 km North from ADNOC Service Station, Al Muhallab (885), 14 m a.s.l.: near wall of villa, on roadside, 23.V 2020, V.B., M.K. 3202 (LE); 14) 25°35'49.78" N, 56°19'22.51" E, Al Dibba town, Al Phoenician Nursery, 0.3 km to South-West from first roundabout on the E99 road from Khorfakkan to Dibba. 11 m a.s.l.: weed (run wild) in nursery, 26.V 2020, V.B., M.K. 3246 (LE, FSH); 15) 25°28'17.54" N, 56°21'8.03" E, Sharm, 10-45 m a.s.l.: run wild near wall in shady side street between villas, 28.V 2020, V.B., M.K. 3391 (LE); 16) 25°26'9.06" N, 56°20'17.72" E, Al Bidiya, Desert Oasis Nursery Bidyah, 0.7 km West from Bidiyah Association for

Culture and Folklore. 14 m a.s.l.: weed (run wild) on irrigation in plantation, in plastic pots and between pots; under tree, near wall, 4.VI 2020, V.B., M.K. 3424 (LE, FSH); 17) 25°34'33.97" N, 56°14'6.15" E, Al Dibba town, Alamarey Nursery, 0.5 km South from Khalid Hadi Resort Dibba, 45 m a.s.l.: run wild on near the garden fence, 13.VI 2020, V.B., M.K. 3556 (LE, FSH); 18) 25°36'32.36" N, 56°16'39.21" E, Al Dibba town, plant nursery on the corner between Street Number 30 and Corniche Street 101, 6 m a.s.l.: run wild in and between plastic pots with cultivated plants, 16.VI 2020, V.B., M.K. s.n. (LE, FSH); 19) 25°36'19.87" N, 56°17'0.48" E, Al Dibba town, plant nursery "Corniche Nursery", 0.4 km South-West by road from roundabout between Corniche Street 101 and Sambraid Beach road, 3 m a.s.l.: run wild in nursery, 19.VI 2020, V.B., M.K. 3692 (LE, FSH). – The decorative tree comes from the Central or South America, currently naturalized in many countries with tropical and subtropical climates. According to the GBIF website, it is marked as alien in 146 countries of the world (*Leucaena leucocephala*..., 2019). Invasive in the United States (Kraus et al., 2020), Australia (Pagad, 2019), India (Sudhakar Reddy et al., 2008), Japan (Ikeda et al., 2019) and many other. There is no marks in GBIF from Arabia (*Leucaena leucocephala*..., 2019), although it is rarely cultivated here (Wood, 1997). A cultivated, fast-growing plant, it provides excellent shade on the streets, in gardens and parks, while tolerating soil salinity well. Therefore, it is widespread in the flat part of the UAE: Al Ain, Dubai, Ajman, as well as on the coastal plain of Fujairah (Karim, Dakheel, 2006). In the emirate of Fujairah, it is one of the most frequently run wild species of introduced plants, after *Prosopis juliflora* and could be found run wild, perhaps in all settlements, as well as in gardens and nurseries. However, it has not been previously reported as an ergasiophygyte. (см. Western, 1989; Jongbloed, 2003; Karim, Fawzi, 2007 et al.). New alien species for Fujairah and the UAE.

***Pithecellobium dulce* (Roxb.) Benth.: 1) 25°8'30.90" N, 56°21'17.35" E, Al Fujairah city, villas south from Umbrella beach, gardens and villas near Al Sharqi Medical Centre, 4 m a.s.l.: run wild on roadside, 18.IV 2020, M.V. Korshunov s.n. (LE); 2) 25°36'9.81" N, 56°16'41.30" E, Al Dibba town, Al Shams Nursery, near Dibba Theatre (0.1 km to East), 6 m a.s.l.: naturalized plant in wasteland in place of an abandoned garden (or plant nursery), 28.IV 2020, V.B., M.K. 2488 (FSH, LE); 3) 25°35'47.57" N, 56°15'32.82" E, Al Dibba town, drainage channel with mango plantation in it, 0.4 km North-West from Federal Electricity & Water Authority, 13 m a.s.l.: weed

under date palm in a shady lane, 2.V 2020, V.B., M.K. 2581 (LE); 4) ca. 25°7'22.82" N, 56°21'23.00" E, Al Fujairah city, lanes in the square near Al Hayl Tower, 3 m a.s.l.: weed in shady lane, 9.V 2020, V.B., M.K. 2775 (LE); 5) 25°25'55.03" N, 56°20'20.99" E, Al Bidya, near Green Cost Nursery Bidiya plant selling, 14 m a.s.l.: run wild near garden wall, 11.V 2020, V.B., M.K. (LE); 6) 25°25'15.85" N, 56°20'27.64" E, Al Bidiya, Abu Khalid agricultural nursery. 0.3 km to South from Eid Prayer Ground Bidiyah, 18 m a.s.l.: run wild in nursery, 12.V 2020, V.B., M.K. 2911 (LE, FSH); 7) 25°28'17.54" N, 56°21'8.03" E, Sharm, 20–45 m a.s.l.: run wild in shady side street between villas, 28.V 2020, V.B., M.K. 3349 (LE); 8) 25°17'28.28" N, 56°6'48.62" E, Masafi friday market, E88 Al Dhaid – Masafi road, 5.2 km to Masafi. 370 m a.s.l.: weed (run wild) in pots and near plastic pots, 2.VI 2020, V.B., M.K. 3365 (LE); 9) 25°35'45.41" N, 56°16'36.48" E, Al Dibba town, 0.2 km North from ADNOC Service Station, Al Muhallab (885), 14 m a.s.l.: on roadside in back street, 23.V 2020, V.B., M.K. 3212 (LE); 10) 25°35'45.41" N, 56°16'36.48" E, Al Dibba town, 0.2 km North from ADNOC Service Station, Al Muhallab (885), 14 m a.s.l.: in irrigation circle under tree and near fence, 23.V 2020, V.B., M.K. 3195 (LE); 11) 25°26'9.06" N, 56°20'17.72" E, Al Bidiya, Desert Oasis Nursery Bidiyah, 0.7 km West from Bidiyah Association for Culture and Folklore. 14 m a.s.l.: run wild in nursery, 4.VI 2020, V.B., M.K. 3421 (LE, FSH); 12) 25°36'32.36" N, 56°16'39.21" E, Al Dibba town, plant nursery on the corner between Street Number 30 and Corniche Street 101, 6 m a.s.l.: run wild on in and between plastic pots with cultivated plants and under trees, in shade, 16.VI 2020, V.B., M.K. 3670 (LE, FSH). – Alien species of American origin. Listed as an introduced species for 73 countries (*Pithecellobium dulce*..., 2020), including most Arabian countries. Listed as an invasive species in Australia (Randall et al., 2020) and mane other. Previously cited as cultivated for Yemen (Wood, 1997), as well as for most other countries of Arabia (POWO, 2020). Widely cultivated in hedges in date orchards, parks and streets, tolerates salinity. Distributed in the UAE mainly on the coast of the Persian Gulf and in Al Ain (Al Ain, Dubai, Sharjah and R'as al-Khaimah) (Karim, Dakheel, 2006), apparently runs wild everywhere, but as an ergasiofigophyte it has not been previously cited (Western, 1989; Jongbloed, 2003; Karim, Fawzi, 2007 et al.). New alien species for Fujairah and the UAE.

**Azadirachta indica* A. Juss.: 1) 25°26'13" N, 56°20'2" E, village Al Bidya, private garden and nursery of Dr. Ali near Hajar mountains, weed in

nursery, 11 XII 2017, V.V. Byalt field N 125 (LE); 2) 25°32'55.32" N, 56°21'16.96" E, Rul Dhadna, drainage channel between villas. 5 m a.s.l.: run wild in gravel-sand drainage channel, 17.IV 2020, V.B., M.K. 2153 (LE); 3) 25°8'30.90" N, 56°21'17.35" E, Fujairah, villas south from Umbrella beach, gardens and villas near Al Sharqi Medical Centre, 4 m a.s.l.: near garden wall, 18.IV 2020, M.V. Korshunov s.n. (LE); 4) 25°22'30.68" N, 56°20'41.51" E, Sharjah Emirate, Khorfakkan, waste water channel on the north of Khorfakkan town, E99 Rugaylat road, near Oceanic Khorfakkan Resort & Spa. 10 m a.s.l.: on left channel bank, near villa wall, 23.IV 2020, V.B., M.K. 2374 (LE); 5) 25°16'46.11" N, 56°21'28.88" E, Mirbah town, 0.3 km West from Comprehensive Police Station Murbah, 19 m a.s.l.: weed in small palm garden near fence on roadside, 23.IV 2020, V.B., M.K. 2399 (LE); 6) 25°31'36.30" N, 56°20'58.46" E, Rul Dadhna, Salama Plant Nursery 0.6 km West from ADNOC Petrol Station on E99 Rugaylat road. 17 m a.s.l.: weed in plant nursery between pots on path, 25.IV 2020, V.B., M.K. 2431 (LE); 7) 25°36'5.21" N, 56°15'45.67" E, Al Dibba town, Green Oasis Nursery, 0.6 km South-West from Street Number 35, or 0.8 km North from Federal Electricity & Water Authority, 10 m a.s.l.: naturalized plant in wasteland in place of an abandoned garden (or plant nursery), 28.IV 2020, V.B., M.K. 2483 (FSH, LE); 8) 25°34'24.07" N, 56°14'6.39" E, Al Dibba town, private nurseries, 0.2 km South from Al Ameray Nursery, 48 m a.s.l.: weed between plastic pots, 7.V 2020, V.B., M.K. 2743 (LE); 9) 25°35'47.57" N, 56°15'32.82" E, Al Dibba town, drainage channel with mango plantation in it, 0.4 km North-West from Federal Electricity & Water Authority, 13 m a.s.l.: run wild in drainage channel on gravel-sand, 2.V 2020, V.B., M.K. 2578 (LE); 10) 25°25'55.03" N, 56°20'20.99" E, Al Bidya, near Green Cost Nursery Bidiya plant selling, 14 m a.s.l.: weed in irrigation near wall of home; under tree, 11.V 2020, V.B., M.K. 2855 (LE); 11) 25°25'15.85" N, 56°20'27.64" E, Al Bidiya, Abu Khalid agricultural nursery. 0.3 km to South from Eid Prayer Ground Bidiyah, 18 m a.s.l.: run wild in irrigation under tree, in shade, 12.V 2020, V.B., M.K. 2909 (LE, FSH); 12) 25°35'45.41" N, 56°16'36.48" E, Al Dibba town, 0.2 km North from ADNOC Service Station, Al Muhallab (885), 14 m a.s.l.: run wild near wall, in irrigation circles, 23.V 2020, V.B., M.K. 3205 (LE); 13) 25°35'49.78" N, 56°19'22.51" E, Al Dibba town, Al Phoenician Nursery, 0.3 km to South-West from first roundabout on the E99 road from Khorfakkan to Dibba, 11 m a.s.l.: run wild on irrigated plantation, under trees, in shade, under palm trees, 26.V 2020, V.B., M.K. 3254 (LE, FSH); 14)

25°30'6.28" N, 56°21'30.01" E, Al Aqah, 14 m a.s.l.: in irrigation circles near villa, under tree, 26.V 2020, V.B., M.K. 3280, 3285 (LE, FSH); 15) 25°28'17.54" N, 56°21'8.03" E, Sharm, 20–45 m a.s.l.: weed in irrigation circles in shady side street between villas, 28.V 2020, V.B., M.K. 3343 (LE); 16) 25°26'9.06" N, 56°20'17.72" E, Al Bidiya, Desert Oasis Nursery Bidiyah, 0.7 km West from Bidiyah Association for Culture and Folklore, 14 m a.s.l.: common weed (run wild) on irrigation in plantation; in plastic pot and between pots; under trees, near wall, 4.VI 2020, V.B., M.K. 3407 (LE, FSH); 17) 25°34'33.97" N, 56°14'6.15" E, Al Dibba town, Alamarey Nursery, 0.5 km South from Khalid Hadi Resort Dibba, 45 m a.s.l.: run wild under trees, in shade, 13.VI 2020, V.B., M.K. 3641 (LE, FSH); 18) 25°36'27.67" N, 56°17'50.50" E, Al Dibba town, wasteland on the abandoned villas land near the Dibba Port, 3 m a.s.l.: run wild on sand-gravel wasteland, 16.VI 2020, V.B., M.K. 3646 (LE, FSH); 19) 25°36'32.36" N, 56°16'39.21" E, Al Dibba town, plant nursery on the corner between Street Number 30 and Corniche Street 101, 6 m a.s.l.: run wild on irrigation in and between plastic pots with cultivated plants, under trees, in shade, 16.VI 2020, V.B., M.K. 3674 (LE, FSH); 20) 25°36'19.87" N, 56°17'0.48" E, Al Dibba town, plant nursery "Corniche Nursery", 0.4 km South-West by road from roundabout between Corniche Street 101 and Sambraid Beach road. 3 m a.s.l.: run wild under trees, in shade; on sand, 19.VI 2020, V.B., M.K. 3716 (LE, FSH). – Alien species of Asian origin (common in nature from Bangladesh to Indochina) (POWO, 2020). Cited as an introduced species for 80 countries (*Azadirachta indica*..., 2020), including in some Arabian countries. Listed as an invasive species in Australia (Pagad, 2020), India (Sankaran et al., 2020), United Mexican States (González Martínez et al., 2020) and many other. Previously reported for Oman as a cultivated species (Ghazanfar, 1992), as for most other countries in Arabia (POWO, 2020). Previously listed as being cultivated in the UAE, where it is grown in dry, hot and salty conditions in Al Ain, Abu Dhabi and Dubai (Karim, Dakheel, 2006). Distinguish as high salt resistant. A new alien species for Fujairah, where it is grown in large quantities, also wildy and even naturalized in suitable places.

**Melia azedarach* L.: 1) ca. 25°31' N, 56°20' E, Rul Dadhna, gardens, ca. 20 m a.s.l.: near garden wall, 25.IV 2020, V.B., M.K. 2448 (LE). – This tree comes from South, Southeast Asia, New Guinea and Australia (POWO, 2020). Listed as an introduced and invasive species for 128 countries (*Melia azedarach*..., 2020). Cultivated and almost naturalized in some places

of Yemen, where it is usually planted in villages at altitudes from sea level to 1500 m, sometimes self-seeding and runs wild (Wood, 1997). In Fujairah it is rarely cultivated, but around irrigated plantings it also sometimes self-seeds, for example, in Rul Dadna at the garden fence or in a private garden near the Tawayan village on the border with Mussandam (Oman) (up to 1300 m h.) (our observation). New alien species for the flora of Fujairah and the UAE.

*****Millingtonia hortensis* L.:** 1) 25°16'46.11" N, 56°21'28.88" E, Mirbah town, 0.3 km West from Comprehensive Police Station Murbah, 19 m a.s.l.: on gravel-sand roadside, in small garden and in irrigated circles, a lot, 23.IV 2020, V.B., M.K. 2398 (LE); 2) 25°31'36.30" N, 56°20'58.46" E, Rul Dadhna, Salama Plant Nursery 0.6 km West from ADNOC Petrol Station on E99 Rugaylat road. 17 m a.s.l.: weed in plant nursery between pots, in the pots, near garden wall, in agricultural waste, common, 25.IV 2020, V.B., M.K. 2433 (LE); 3) 25°36'9.81" N, 56°16'41.30" E, Al Dibba town, Al Shams Nursery, near Dibba Theatre (0.1 km to East), 6 m a.s.l.: weed or naturalized plant on sand in wasteland in place of an abandoned garden (or plant nursery), near garden wall without irrigation, in mass, 28.IV 2020, V.B., M.K. 2475 (FSH, LE); 4) 25°36'5.21" N, 56°15'45.67" E, Al Dibba town, Green Oasis Nursery, 0.6 km South-West from Street Number 35, or 0.8 km North from Federal Electricity & Water Authority, 10 m a.s.l.: weed (run wild) in the pots and between pots, on irrigation in plantation; near garden wall, common, 3.V 2020, V.B., M.K. 2677 (LE); 5) 25°34'24.07" N, 56°14'6.39" E, Al Dibba town, private nurseries, 0.2 km South from Al Amerey Nursery, 48 m a.s.l.: weed in plastic pots, under trees, in shade in 2d nursery, 7.V 2020, V.B., M.K. 2745 (LE); 6) 25°25'24.70" N, 56°20'18.77" E, Al Bidiya, Al Qalamoon Nursery, 0.3 km East from Eid Prayer Ground Bidiyah, 22 m a.s.l.: run wild in and between plastic pots, under tree, in shade, 19.V 2020, V.B., M.K. 3031 (LE, FSH); 7) 25°36'32.36" N, 56°16'39.21" E, Al Dibba town, plant nursery on the corner between Street Number 30 and Corniche Street 101, 6 m a.s.l.: run wild on in and between plastic pots with cultivated plants and near the garden fence, 16.VI 2020, V.B., M.K. 3685 (LE, FSH); 8) 25°36'19.87" N, 56°17'0.48" E, Al Dibba town, plant nursery "Corniche Nursery", 0.4 km South-West by road from roundabout between Corniche Street 101 and Sambraid Beach road. 3 m a.s.l.: run wild on sand on temporally abandoned land, 19.VI 2020, V.B., M.K. 3736 (LE, FSH); 9) 25°30'52.69" N, 56°20'11.79" E, Rul Dadhna, Al Jawhara Plants Nursery, 2 km by the unnamed road from E99 to Wadi Zikt dam., 33 m

a.s.l.: run wild on irrigation and without irrigation on abandoned land, 4. VII 2020, V.B., M.K. 3920 (LE, FSH). – Often cultivated and run wild in nurseries and street landscaping in Fujairah. Alien species of Asian origin (from Myanmar to Indochina) (POWO, 2020). Listed as an introduced species for 4 countries (*Millingtonia hortensis*..., 2020). Listed as invasive species in India (Sankaran et al., 2020), Seychelles (Senterre et al., 2020), Indonesia (Setyawati et al., 2020) and Maldives (Mohamed et al., 2020). For Arabia, it was not cited either in culture nor as an ergasiophygyte.

As a result, we came to the conclusion that nurseries and mini-markets of plants are the main source of the primary appearance of ergasiophygytes (as well as many purely weed species) in the emirate. It was there that we managed to find the largest number of alien species, some of which turned out to be new for the flora of Fujairah and the UAE as a whole.

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References: Mayorov S.R., Bochkina V.D., Nasimovich Yu.A. New ergasiophygytes of the Moscow flora // Byul. MOIP. Otd. Biol. Vol. 124 (3). P. 48–49. – Böer B. 2000. Annotated check-list for plants in the United Arab Emirates. Dubai, 2000. 91 p. – Collette S. An illustrated guide to the flowers of Saudi Arabia. London, 1985. 514 p. – Cornes C.D., Cornes M.D. The wild flowering plants of Bahrain. London, 1989. 272 p. – *DAISIE*. Handbook of Alien Species in Europe / Eds. P. Pyšek, P.W. Lambdon, M. Arianoutsou et al. Dordrecht, 2009. 28+400 p. (Invading Nature – Springer Series in Invasion Ecology. Vol. 3). – Feulner G.R. The Flora of the Ru'us al-Jibal – the mountains of the Musandam Peninsula: an annotated checklist and selected observations // *Tribulus*. 2011. Vol. 19. P. 4–153. – Ghazanfar S.A. An annotated catalogue of the vascular plants of Oman and their vernacular names // *Scripta Botanica Belgica*. 1992. Vol. 2. P. 1–153. – Ghazanfar S.A. Flora of the Sultanate of Oman. Vol. 2. Crassulaceae – Apiaceae // *Scripta Botanica Belgica*. 2007. Vol. 36. P. 1–220. – González Martínez A.I., Barrios Y., De Jesús S. et al. Global Register of Introduced and Invasive Species – Mexico. 2020. Version 1.3. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/08knmc> accessed via GBIF.org on 2020-08-07. – Jongbloed M., Feulner G.,

- Böer, B., Western A.R. The comprehensive guide to the wild flowers of the United Arab Emirates. Abu Dhabi, 2003. 576 p. – Karim F.M., Dakheel A.G. Salt-tolerant plants of the United Arab Emirates. Dubai, 2006. 187 p. – Karim F.M., Fawzi N.M. Flora of the United Arab Emirates. Al-Ain, 2007: Vol. 1. 444 p.; vol. 2. 502 p. (UAE University Publications. # 98.) – Kleunen M.V., Essl F., Pergl J. et al. The changing role of ornamental horticulture in alien plant invasions // Biological Reviews. 2018. Vol. 93 (3). P. 1421–1437. – Kraus F., Daniel W., Wong L.J., Pagad S. Global Register of Introduced and Invasive Species – United States of America (Contiguous). 2020. Version 1.3. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/ehzr9f> accessed via GBIF.org on 2020-08-07. – Migahid A.M. Flora of Saudi Arabia. Ed. 3. Riyadh, 1989. Vol. 2. 282 p. – *Millingtonia hortensis* L.f. in GBIF Secretariat. GBIF Backbone Taxonomy. 2019. Checklist dataset <https://doi.org/10.15468/39omei> accessed via GBIF.org on 2020-08-07. – Mohamed G., Wong L.J., Pagad S. Global Register of Introduced and Invasive Species – Maldives. 2020. Version 1.2. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/fy7drd> accessed via GBIF.org on 2020-08-07. – Mosti S., Raffaelli M., Tardelli M. Contributions to the flora of central-southern Dhofar (Sultanate of Oman) // Webbia. 2012. T. 67. P. 65–91. – Norton J.A., Abdul Majid S., Allan D.R. et al. An illustrated checklist of the flora of Qatar. Gosport, 2009. 96 p. – Pagad S. Global Register of Introduced and Invasive Species – Australia. 2019. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/3pz20c> accessed via GBIF.org on 2020-02-02. – *Parkinsonia aculeata* L. in GBIF Secretariat. GBIF Backbone Taxonomy. 2019. Checklist dataset <https://doi.org/10.15468/39omei> accessed via GBIF.org on 2020-08-05. – POWO: Plants of the World Online. Facilitated by the Royal Botanic Gardens, Kew, 2020. Available at: <http://www.plantsoftheworldonline.org/> Retrieved 31-07-2020. – Pyšek P., Pergl J., Essl F. et al. Naturalized alien flora of the world: species diversity, taxonomic and phylogenetic patterns, geographic distribution and global hotspots of plant invasion // Preslia. 2017. Vol. 89 (3). P. 275–290. – Robinson T., Ivey P., Powrie L. et al. Global Register of Introduced and Invasive Species – South Africa. 2019. Version 2.4. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/16smob> accessed via GBIF.org on 2020-02-02. – Roy H., Rorke S., Jenna Wong L., Pagad S. Global Register of Introduced and Invasive Species – Great Britain. 2020. Version 1.5. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/8rzqvw> accessed via GBIF.org on 2020-07-31. – Sankaran K.V., Khuroo A., Raghavan R. et al. Global Register of Introduced and Invasive Species – India. 2020. Version 1.3. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/uvnf8m> accessed via GBIF.org on 2020-07-31. – Senterre B., Rocamora G., Morel C. et al. Global Register of Introduced and Invasive Species – Seychelles. 2020. Version 2.8. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/9e9pfi> accessed via GBIF.org on 2020-08-07. – Setyawati T., Wong L.J., Pagad S. Global Register of Introduced and Invasive Species – Indonesia. 2020. Version 1.1. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/yrbmv8> accessed via GBIF.org on 2020-08-07. – Western A.R. The flora of the United Arab Emirates: an introduction. Al Ain, 1989. 188 p. – Wood J.R.I. A handbook of the Yemen Flora. Kew, 1997. 434 p. – Zhao C., Liu Q., Li F. et al. Global Register of Introduced and Invasive Species – China. 2020. Version 1.2. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/wstyjh> accessed via GBIF.org on 2020-08-02. – Ziller S., Zenni R., Souza Bastos L. et al. Global Register of Introduced and Invasive Species – Brazil. 2020. Version 1.4. Invasive Species Specialist Group ISSG. Checklist dataset <https://doi.org/10.15468/i0avrm> accessed via GBIF.org on 2020-07-31.

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