

TAXON

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Electronic Supplement to

**A molecular phylogeny and classification
of the largely succulent and mainly African
Euphorbia subg. *Athymalus* (Euphorbiaceae)**

Jess A. Peirson, Peter V. Bruyns, Ricarda Riina, Jeffery J. Morawetz
& Paul E. Berry

Taxon 62: 1178–1199

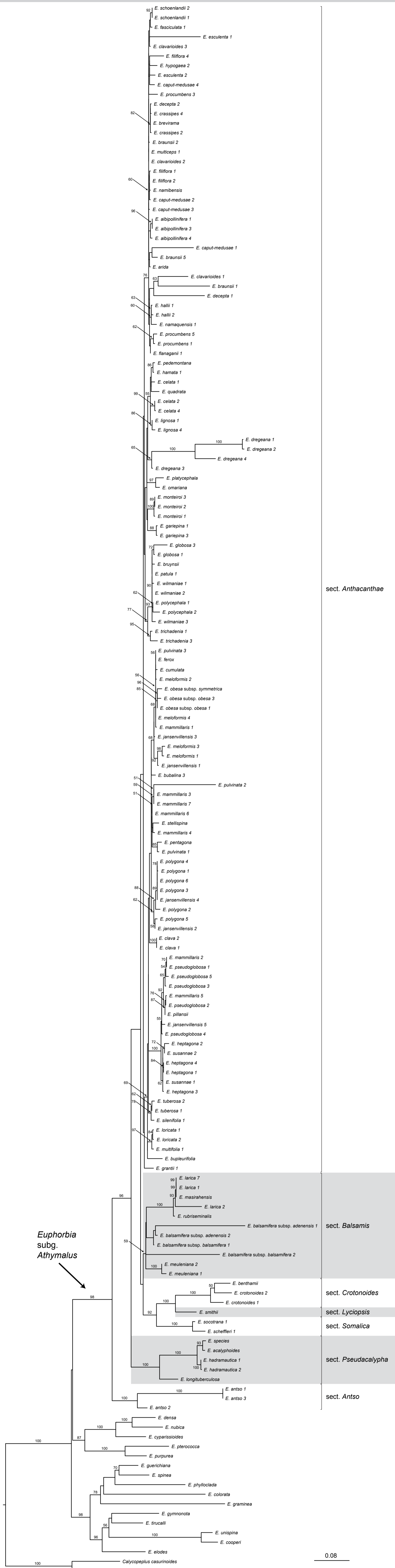


Fig. S1. Maximum likelihood phylogram from RAxML analysis of the complete ITS dataset of *Euphorbia* subg. *Athymalus* and outgroups. Sections recognized in our classification are indicated on the right. Maximum likelihood bootstrap values ($\geq 50\%$) are indicated above the branches. The scale bar indicates the mean number of nucleotide substitutions per site.

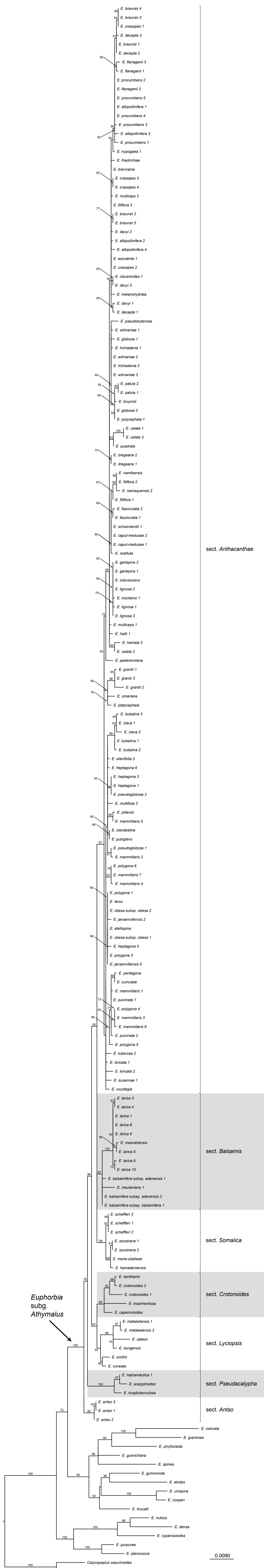


Fig. S2. Maximum likelihood phylogenetic tree from RAXML analysis of the complete *ndhF* dataset of *Euphorbia* subg. *Athymalus* and outgroups. Sections recognized in our classification are indicated on the right. Maximum likelihood bootstrap values ($\geq 50\%$) are indicated above the branches. The scale bar indicates the mean number of nucleotide substitutions per site.

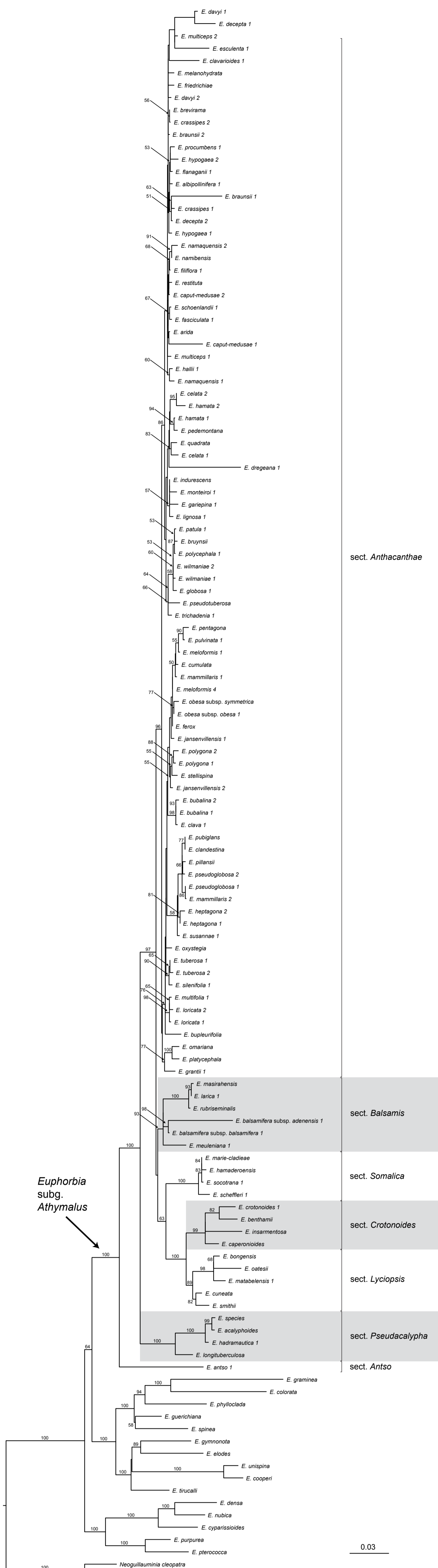


Fig. S3. Maximum likelihood phylogenetic tree from RAxML analysis of the combined ITS+ndhF dataset of *Euphorbia* subg. *Athymalus* and outgroups. Sections recognized in our classification are indicated on the right. Maximum likelihood bootstrap values ($\geq 50\%$) are indicated above the branches. The scale bar indicates the mean number of nucleotide substitutions per site.

Appendix S1. Information on taxa, sample origin, vouchers and their location (herbarium acronym), as well as GenBank accession numbers for ITS and *ndhF* sequences of samples included in the phylogenetic analyses. GenBank accession numbers for newly generated sequences are preceded by an asterisk. A region that was not sequenced for a particular sample is indicated by –.

Calycoplepus casuarinoides L.S. Sm., U.S.A. (cultivated), *V. Steinmann 1407* (RSA), AF537580, JN249080; *Euphorbia acalyphoides* Hochst. ex Boiss. in DC, Kenya, *W. Luke & al. TPRI177* (MO), AF537576, AF538251; *Euphorbia albipollinifera* L.C. Leach 1, Netherlands (cultivated), *R. Riina 1610* (MA), *KF267274, *KF267330; *Euphorbia albipollinifera* L.C. Leach 2, U.S.A. (cultivated), *P. Berry 7758* (MICH), –, *KF267332; *Euphorbia albipollinifera* L.C. Leach 3, Netherlands (cultivated), *R. Riina 1611* (MA), JQ750870, JQ750761; *Euphorbia albipollinifera* L.C. Leach 4, Netherlands (cultivated), *R. Riina 1612* (MA), *KF267275, *KF267331; *Euphorbia antso* Denis 1, Madagascar, *B. Dorsey 105* (MICH), *KF267276, *KF267333; *Euphorbia antso* Denis 2, U.S.A. (cultivated), *V. Steinmann 1473B* (RSA), AF537579, AF538253; *Euphorbia antso* Denis 3, Madagascar, *B. Dorsey 123* (MICH), *KF267277, *KF267334; *Euphorbia arida* N.E. Br., Netherlands (cultivated), *R. Riina 1613* (MA), *KF267278, –, *Euphorbia balsamifera* subsp. *adenensis* (Deflers) Bally 1, Oman, *J. Morawetz 325* (MICH), *KF267279, *KF267335; *Euphorbia balsamifera* subsp. *adenensis* (Deflers) Bally 2, U.S.A. (cultivated), *V. Steinmann 1480* (RSA), AF537571, AF538250; *Euphorbia balsamifera* subsp. *balsamifera* Aiton 1, Spain, *B. Dorsey 3* (MICH), JN250117, JN249107; *Euphorbia balsamifera* subsp. *balsamifera* Aiton 2, Spain, *P. Lavant s.n.* (BOL), JN207741, –, *Euphorbia benthamii* Hiern, Tanzania, *J. Morawetz 479* (MICH), *KF267280, *KF267336; *Euphorbia bongensis* Kotschy & Peyr. ex Boiss., Netherlands (cultivated), *R. Riina 1695a* (MA), –, KC019860; *Euphorbia braunsii* N.E. Br. 1, Netherlands (cultivated), *R. Riina 1617* (MA), *KF267282, *KF267340; *Euphorbia braunsii* N.E. Br. 2, Netherlands (cultivated), *R. Riina 1652* (MA), *KF267283, *KF267341; *Euphorbia braunsii* N.E. Br. 3, South Africa, *R. Becker 1116* (MICH), –, *KF267337; *Euphorbia braunsii* N.E. Br. 4, South Africa, *R. Becker 1124* (MICH), –, *KF267338; *Euphorbia braunsii* N.E. Br. 5, Namibia, *R. Becker 1261* (MICH), *KF267281, *KF267339; *Euphorbia brevirama* N.E. Br., Netherlands (cultivated), *R. Riina 1618* (MA), *KF267284, *KF267342; *Euphorbia bruynsii* L.C. Leach, South Africa, *P. Bruyns 1814* (PRE), AM040759, *KF267343; *Euphorbia bubalina* Boiss. 1, South Africa, *P. Bruyns 12129* (BOL), –, *KF267345; *Euphorbia bubalina* Boiss. 2, South Africa, *P. Bruyns 12112* (BOL), –, *KF267344; *Euphorbia bubalina* Boiss. 3, U.S.A. (cultivated), *P. Berry 7856* (MICH), JN250122, JN249112; *Euphorbia bupleurifolia* Jacq., South Africa, *N. Zimmermann 12/98* (JE), AJ536017/AJ536018, –, *Euphorbia caperonioides* R.A. Dyer & P.G. Mey., Angola, *P. Bruyns 10662* (BOL), –, *KF267346; *Euphorbia caput-medusae* L. 1, South Africa, *R. Becker 877* (MICH), *KF267286, *KF267348; *Euphorbia caput-medusae* L. 2, South Africa, *R. Becker 866* (MICH), *KF267285, *KF267347; *Euphorbia caput-medusae* L. 3, U.S.A. (cultivated), *V. Steinmann 1463* (RSA), AF537574, –, *Euphorbia caput-medusae* L. 4, South Africa, *N. Zimmermann 30/00* (JE), AJ535533/AJ535555, –, *Euphorbia celata* R.A. Dyer 1, Netherlands (cultivated), *R. Riina 1671* (MA), *KF267287, *KF267350; *Euphorbia celata* R.A. Dyer 2, Netherlands (cultivated), *R. Riina 1674* (MA), JN250194, JN249182; *Euphorbia celata* R.A. Dyer 3, South Africa, *R. Becker 1241* (MICH), –, *KF267349; *Euphorbia celata* R.A. Dyer 4, U.S.A. (cultivated), *V. Steinmann 1491* (RSA), AF537562, –, *Euphorbia clandestina* Jacq., South Africa (cultivated), *J. Morawetz 307* (MICH), –, *KF267351; *Euphorbia clava* Jacq. 1, U.S.A. (cultivated), *P. Berry 7881* (MICH), JN250127, JN249117; *Euphorbia clava* Jacq. 2, U.S.A. (cultivated), *V. Steinmann 1472B* (RSA), AF537569, AF538245; *Euphorbia clavarioides* Boiss. 1, South Africa, *R. Becker 1281* (MICH), *KF267288, *KF267352; *Euphorbia clavarioides* Boiss. 2, Netherlands (cultivated), *R. Riina 1619* (MA), *KF267289, –, *Euphorbia clavarioides* Boiss. 3, Netherlands (cultivated), *R. Riina 1620* (MA), *KF267290, –, *Euphorbia colorata* Engelm., Mexico, *T. Van Devender 2006–1031* (MICH), JQ750898, JQ750780; *Euphorbia cooperi* N.E. Br. Ex A. Berger, South Africa, *R. Becker & al. 987* (MICH), KC019714, KC019858; *Euphorbia crassipes* Marloth 1, Netherlands (cultivated), *R. Riina 1624* (MA), –, *KF267354; *Euphorbia crassipes* Marloth 2, Netherlands (cultivated), *R. Riina 1633* (MA), JN250155, JN249145; *Euphorbia crassipes* Marloth 3, South Africa, *R. Becker 1276* (MICH), –, *KF267353; *Euphorbia crassipes* Marloth 4, Netherlands (cultivated), *R. Riina 1660* (MA), *KF267291, *KF267355; *Euphorbia crotonoides* Boiss. 1, Tanzania, *J. Morawetz 456* (MICH), JQ750871, JQ750784; *Euphorbia crotonoides* Boiss. 2, Tanzania, *M. Richards 23765* (NY), AF537578, AF538238; *Euphorbia cumulata* R.A. Dyer, Netherlands (cultivated), *R. Riina 1678* (MA), *KF267294, *KF267358; *Euphorbia cuneata* Vahl, Tanzania, *J. Morawetz 443* (MICH), –, *KF267359; *Euphorbia cyparissiioides* Pax, Tanzania, *J. Morawetz 463* (MICH), KC212216, KC212481; *Euphorbia davyi* N.E. Br. 1, Netherlands (cultivated), *R. Riina 1642* (MA), –, *KF267361; *Euphorbia davyi* N.E. Br. 2, South Africa, *R. Becker 1270* (MICH), –, *KF267360; *Euphorbia davyi* N.E. Br. 3, U.S.A. (cultivated), *P. Berry 7754* (MICH), –, *KF267362; *Euphorbia decepta* N.E. Br. 1, Netherlands (cultivated), *R. Riina 1663* (MA), *KF267296, *KF267365; *Euphorbia decepta* N.E. Br. 2, Netherlands (cultivated), *R. Riina 1609* (MA), *KF267295, *KF267364; *Euphorbia decepta* N.E. Br. 3, South Africa, *R. Becker 1127* (MICH), –, *KF267363; *Euphorbia densa* Schrenk, Iran, *F. Termeh s.n.* (MICH), KC212221, KC212484; *Euphorbia dregeana* E. Mey. ex Boiss. 1, South Africa, *R. Becker 897* (MICH), JN250140, JN249130; *Euphorbia dregeana* E. Mey. ex Boiss. 2, U.S.A. (cultivated), *P. Berry 7815* (MICH), JN250139, JN249129; *Euphorbia dregeana* E. Mey. ex Boiss. 3, South Africa, *N. Zimmermann s.n.* (JE), AJ534724/AJ534734, –, *Euphorbia dregeana* E. Mey. ex Boiss. 4, South Africa, *P. Bruyns 11118* (E), JN207761, –, *Euphorbia elodes* Boiss., Brazil, *I. Cordeiro 3053* (SP), KC019596, KC019779; *Euphorbia esculenta* Marloth 1, Netherlands (cultivated), *R. Riina 1628* (MA), *KF267297, *KF267360; *Euphorbia esculenta* Marloth 2, U.S.A. (cultivated), *V. Steinmann 1474* (RSA), AF537575, –, *Euphorbia fasciculata* Thunb. 1, U.S.A. (cultivated), *P. Berry 7785* (MICH), JN250147, JN249137; *Euphorbia fasciculata* Thunb. 2, South Africa, *R. Becker 1207* (MICH), –, *KF267367; *Euphorbia ferox* Marloth, South Africa, *J. Morawetz 275* (MICH), *KF267298, *KF267368; *Euphorbia filiflora* Marloth 1, South Africa, *R. Becker 891* (MICH), JN250149, JN249139; *Euphorbia filiflora* Marloth 2, South Africa, *R. Becker 895* (MICH), *KF267299, *KF267369; *Euphorbia filiflora* Marloth 3, Netherlands (cultivated), *R. Riina 1629* (MA), –, *KF267370; *Euphorbia filiflora* Marloth 4, South Africa, *P. Bruyns 5156* (BOL), AM040768, –, *Euphorbia flanaganii* N.E. Br. 1, U.S.A. (cultivated), *P. Berry 7800* (MICH), JN250151, JN249141; *Euphorbia flanaganii* N.E. Br. 2, Netherlands (cultivated), *R. Riina 1630* (MA), –, *KF267372; *Euphorbia flanaganii* N.E. Br. 3, Netherlands (cultivated), *R. Riina 1631* (MA), –, *KF267371; *Euphorbia friedrichiae* Dinter, Namibia, *R. Becker 1263* (MICH), –, *KF267373; *Euphorbia gariepina* Boiss. 1, South Africa, *R. Becker 918* (PRE), JN250156, JN249146; *Euphorbia gariepina* Boiss. 2, Netherlands (cultivated), *R. Riina 1672* (MA), –, *KF267374; *Euphorbia gariepina* Boiss. 3, South Africa, *P. Bruyns 4501* (MO), AM040769, –, *Euphorbia globosa* (Haw.) Sims 1, U.S.A. (cultivated), *P. Berry 7814* (MICH), JN250158, JN249149; *Euphorbia globosa* (Haw.) Sims 2, U.S.A. (cultivated), *V. Steinmann 1454A* (RSA), –, AF538239; *Euphorbia globosa* (Haw.) Sims 3, South Africa, *N. Zimmermann 29/98* (JE), AJ535535/AJ535557, –, *Euphorbia graminea* Jacq., Venezuela, *R. Riina 1606* (VEN), *KF267273, *KF267329; *Euphorbia grantii* Oliv. 1, Tanzania, *G. Mwiga 108* (MO), JN250162, JN249153; *Euphorbia grantii* Oliv. 2, Tanzania, *J. Morawetz 459* (MICH), –, *KF267375; *Euphorbia grantii* Oliv. 3, Tanzania, *G. Bidgood & al. 1186* (MO), –, AF538242; *Euphorbia guericiana* Pax, South Africa, *R. Becker 929* (PRE), JQ750918, JQ750804; *Euphorbia gymnonota* Urb., U.S.A. (cultivated), *Y. Yang 185* (MICH), JQ750886, JQ750808; *Euphorbia hadramautica* Baker 1, Oman, *J. Morawetz 320* (MICH), JN250166, JN249156; *Euphorbia hadramautica* Baker 2, Yemen, *P. Bruyns 10909* (E), JN207776, –, *Euphorbia hallii* R.A. Dyer 1, South Africa, *R. Becker 865* (MICH), *KF267300, *KF267376; *Euphorbia hallii* R.A. Dyer 2, U.S.A. (cultivated), *V. Steinmann 1475* (RSA), AF537573, –, *Euphorbia hamaderoensis* A.G. Mill., Yemen (Socotra), *P. Bruyns 10945a* (BOL), –, *KF267377; *Euphorbia hamata* (Haw.) Sweet 1, South Africa, *P. Bruyns 4347* (E), AM040774, –, *Euphorbia hamata* (Haw.) Sweet 2, U.S.A. (cultivated), *V. Steinmann 1454B* (RSA), –, AF538237; *Euphorbia heptagona* L. 1, South Africa, *J. Morawetz 281* (MICH), *KF267301, *KF267378; *Euphorbia heptagona* L. 2, South Africa, *N. Zimmermann 63/98* (JE), AJ535526/AJ535548, –, *Euphorbia heptagona* L. 3, South Africa (cultivated), *J. Morawetz 308* (MICH), JN250116, JN249106; *Euphorbia heptagona* L. 4, U.S.A. (cultivated), *V. Steinmann 1478* (RSA), AF537568, –, *Euphorbia heptagona* L. 5, South Africa, *J. Morawetz 267* (MICH), –, *KF267380; *Euphorbia heptagona* L. 6, South Africa, *R. Becker 1100* (MICH), –, *KF267379; *Euphorbia hypogaea* Marloth 1, Netherlands (cultivated), *R. Riina 1640* (MA), –, *KF267381; *Euphorbia hypogaea* Marloth 2, U.S.A. (cultivated), *N. Zimmerman ex cult.* (JE), AJ535534/AJ535556, –, *Euphorbia indurescens* L.C. Leach, Angola, *P. Bruyns 10709* (E), –, *KF267382; *Euphorbia insarmentosa* P.G. Mey., Namibia, *H. Merxmüller 30586* (PRE), –, *KF267383; *Euphorbia jansenvillensis* Nel 1, South Africa, *N. Zimmermann 80/96* (JE), AJ535524/AJ535546, –, *Euphorbia jansenvillensis* Nel 2, Netherlands (cultivated), *R. Riina 1681* (MA), JN250176, JN249166; *Euphorbia jansenvillensis* Nel 3, U.S.A. (cultivated), *V. Steinmann 1462* (RSA), AF537567, –, *Euphorbia jansenvillensis* Nel 4, South Africa, *W. Rauh 8958* (JE), AJ535522/AJ535544, –, *Euphorbia jansenvillensis* Nel 5, South Africa, *R. Becker 1173* (MICH), *KF267302, *KF267384; *Euphorbia larica* Boiss. 1, Oman, *J. Morawetz 368* (MICH), *KF267303, *KF267385; *Euphorbia larica* Boiss. 2, Iran, *S. Zarre & Y. Salmaki 39951* (TUH), JF732969, –, *Euphorbia larica* Boiss. 3, Oman, *J. Morawetz 350* (MICH), –, *KF267388; *Euphorbia larica* Boiss. 4, Oman, *J. Morawetz 357*

Appendix S1. Continued.

(MICH), –, *KF267389; *Euphorbia larica* Boiss. 5, Oman, *J. Morawetz* 359 (MICH), –, *KF267390; *Euphorbia larica* Boiss. 6, Oman, *J. Morawetz* 362 (MICH), –, *KF267391; *Euphorbia larica* Boiss. 7, Iran, *M. Rikanek* & *P. Hanacek s.n.* (BRN), JN207784, –, *Euphorbia larica* Boiss. 8, Oman, *J. Morawetz* 365 (MICH), –, *KF267392; *Euphorbia larica* Boiss. 9, Oman, *J. Morawetz* 334 (MICH), –, *KF267386; *Euphorbia larica* Boiss. 10, Oman, *J. Morawetz* 338 (MICH), –, *KF267387; *Euphorbia lignosa* Marloth 1, Namibia, *G. Davidse* & *A. Loxton* 6316 (MO), JN250183, JN249173; *Euphorbia lignosa* Marloth 2, South Africa (cultivated), *J. Morawetz* 282 (MICH), –, *KF267393; *Euphorbia lignosa* Marloth 3, U.S.A. (cultivated), *V. Steinmann* 1455 (RSA), –, AF538240; *Euphorbia lignosa* Marloth 4, Germany (cultivated), *W. Rauh* 19624 (JE), AJ534723/AJ534733, –, *Euphorbia longituberculosa* Hochst. ex Boiss., U.S.A. (cultivated), *V. Steinmann* 1479 (RSA), AF537577, AF538252; *Euphorbia loricata* Lam. 1, South Africa, *R. Becker* 859 (MICH), *KF267305, *KF267395; *Euphorbia loricata* Lam. 2, South Africa, *R. Becker* 1185 (MICH), *KF267304, *KF267394; *Euphorbia mammillaris* L. 1, South Africa, *R. Becker* 1176 (MICH), *KF267310, *KF267400; *Euphorbia mammillaris* L. 2, South Africa, *J. Morawetz* 304 (MICH), *KF267307, *KF267397; *Euphorbia mammillaris* L. 3, U.S.A. (cultivated), *P. Berry* 7775 (MICH), JN250188, JN249177; *Euphorbia mammillaris* L. 4, South Africa (cultivated), *J. Morawetz* 296 (MICH), *KF267306, *KF267396; *Euphorbia mammillaris* L. 5, South Africa, *R. Becker* 1144 (MICH), *KF267309, *KF267399; *Euphorbia mammillaris* L. 6, U.S.A. (cultivated), *P. Berry* 7782 (MICH), JN250150, JN249140; *Euphorbia mammillaris* L. 7, South Africa, *R. Becker* 683 (MICH), *KF267308, *KF267398; *Euphorbia marie-cladiae* Rzepecky, Yemen (Socotra), *Rzepecky* 12072303 (FT), –, *KF267401; *Euphorbia masirahensis* Ghaz., Oman, *J. Morawetz* 348 (MICH), *KF267311, *KF267402; *Euphorbia matabelensis* Pax 1, Tanzania, *J. Morawetz* 473 (MICH), –, *KF267403; *Euphorbia matabelensis* Pax 2, Botswana, *P. Smith* 4229 (MO), –, AF538247; *Euphorbia melanohydrata* Nel, Namibia, *R. Becker* 1245 (MICH), –, *KF267404; *Euphorbia meloformis* Aiton 1, South Africa, *N. Zimmermann* 52/00 (JE), AJ535521/AJ535543, –, *Euphorbia meloformis* Aiton 2, U.S.A. (cultivated), *V. Steinmann* 1490 (RSA), AF537565, –, *Euphorbia meloformis* Aiton 3, South Africa, *N. Zimmermann* 8/98/2 (JE), AJ535517/AJ535542, –, *Euphorbia meloformis* Aiton 4, South Africa, *N. Zimmermann* 49/98 (JE), AJ535520/AJ535541, –, *Euphorbia meuleniana* O. Schwartz 1, Yemen, *A. Miller* 35229 (E), JN207791, *KF267405; *Euphorbia meuleniana* O. Schwartz 2, U.S.A. (cultivated), *V. Steinmann* 1448 (RSA), AF537572, –, *Euphorbia monteiroi* Hook. 1, South Africa, *R. Becker* 1307 (MICH), *KF267312, *KF267406; *Euphorbia monteiroi* Hook. 2, South Africa (cultivated), *J. Morawetz* 312 (MICH), *KF267313, –, *Euphorbia monteiroi* Hook. 3, Botswana, *D. Long* & *D. Rae* 290 (K), AF537563, –, *Euphorbia multiceps* A. Berger 1, Netherlands (cultivated), *R. Riina* 1645 (MA), *KF267314, *KF267408; *Euphorbia multiceps* A. Berger 2, South Africa, *R. Becker* 1140 (MICH), –, *KF267407; *Euphorbia multifolia* A.C. White, R.A. Dyer & B. Sloane 1, South Africa, *P. Bruyns* 2791 (BOL), AM040782, –, *Euphorbia multifolia* A.C. White, R.A. Dyer & B. Sloane 2, South Africa, *R. Becker* 1182 (MICH), –, *KF267409; *Euphorbia namaquensis* N.E. Br. 1, South Africa, *P. Bruyns* 4655 (BOL), JN207793, –, *Euphorbia namaquensis* N.E. Br. 2, South Africa, *R. Becker* 1266 (MICH), –, *KF267410; *Euphorbia namibensis* Marloth, Netherlands (cultivated), *R. Riina* 1647 (MA), *KF267315, *KF267411; *Euphorbia nubica* N.E. Br., Kenya, *J. Morawetz* 391 (MICH), KC212323, KC212586; *Euphorbia oatesii* Rolfe in Oates, Zimbabwe, *P. Bruyns* 7455 (BOL), –, *KF267412; *Euphorbia obesa subsp. obesa* Hook.f. 1, U.S.A. (cultivated), *K. Wurdack* D539 (US), JN250202, JN249189; *Euphorbia obesa subsp. obesa* Hook.f. 2, U.S.A. (cultivated), *V. Steinmann* 1465 (RSA), –, AF538244; *Euphorbia obesa subsp. obesa* Hook.f. 3, South Africa, *N. Zimmermann* 46/00 (JE), AJ535519/AJ535540, –, *Euphorbia obesa subsp. symmetrica* (A.C.White, R.A.Dyer & B.Sloane) G.D.Rowley, South Africa, *N. Zimmermann* 39/00 (JE), AJ535518/AJ535539, –, *Euphorbia omariana* M.G. Gilbert, Ethiopia, *I. Friss* & al. 3674 (K), AF537560, AF538243; *Euphorbia oxystegia* Boiss., South Africa, *R. Becker* 1219 (MICH), –, *KF267413; *Euphorbia patula* Mill. 1, U.S.A. (cultivated), *P. Berry* 7779 (MICH), JN250203, JN249190; *Euphorbia patula* Mill. 2, U.S.A. (cultivated), *P. Berry* 7741 (MICH), –, *KF267414; *Euphorbia pedemontana* L.C. Leach, U.S.A. (cultivated), *P. Berry* 7872 (MICH), JN250208, JN249195; *Euphorbia pentagona* Haw., South Africa, *J. Morawetz* 265 (MICH), *KF267316, *KF267415; *Euphorbia phylloclada* Boiss., South Africa, *E. Oliver* & al. 6611 (K), AF537427, AF538179; *Euphorbia pillansii* N.E. Br., South Africa, *R. Becker* 1145 (MICH), *KF267317, *KF267416; *Euphorbia platycephala* Pax, Tanzania, *G. Bidgood* & al. 2249 (K), AF537561, AF538241; *Euphorbia polycephala* Marloth 1, Netherlands (cultivated), *R. Riina* 1667 (MA), JN250215, JN249202; *Euphorbia polycephala* Marloth 2, South Africa, *P. Bruyns* 11054 (BOL), JN207803, –, *Euphorbia polygona* Haw. 1, South Africa, *J. Morawetz* 264 (MICH), *KF267292, *KF267356; *Euphorbia polygona* Haw. 2, South Africa, *N. Zimmermann* 317/97 (JE), AJ535525/AJ535547, –, *Euphorbia polygona* Haw. 3, U.S.A. (cultivated), *P. Berry* 7784 (MICH), *KF267293, *KF267357; *Euphorbia polygona* Haw. 4, South Africa, *J. Morawetz* 263 (MICH), JN250216, JN249203; *Euphorbia polygona* Haw. 5, U.S.A. (cultivated), *P. Berry* 7783 (MICH), JN250172, JN249162; *Euphorbia polygona* Haw. 6, Netherlands (cultivated), *R. Riina* 1679 (MA), JN250173, JN249163; *Euphorbia procumbens* Mill. 1, Netherlands (cultivated), *R. Riina* 1638 (MA), *KF267319, *KF267419; *Euphorbia procumbens* Mill. 2, Netherlands (cultivated), *R. Riina* 1636 (MA), –, *KF267417; *Euphorbia procumbens* Mill. 3, Netherlands (cultivated), *R. Riina* 1656 (MA), *KF267320, *KF267420; *Euphorbia procumbens* Mill. 4, Netherlands (cultivated), *R. Riina* 1657 (MA), –, *KF267421; *Euphorbia procumbens* Mill. 5, Netherlands (cultivated), *R. Riina* 1637 (MA), *KF267318, *KF267418; *Euphorbia pseudoglobosa* Marloth 1, U.S.A. (cultivated), *P. Berry* 7803 (MICH), JN250218, JN249205; *Euphorbia pseudoglobosa* Marloth 2, South Africa, *R. Becker* 1146 (MICH), *KF267321, *KF267422; *Euphorbia pseudoglobosa* Marloth 3, U.S.A. (cultivated), *B. Reddi s.n.* (JE), AJ535528/AJ535550, –, *Euphorbia pseudoglobosa* Marloth 4, South Africa, *N. Zimmermann* 28/96 (JE), AJ535530/AJ535552, –, *Euphorbia pseudoglobosa* Marloth 5, South Africa, *N. Zimmermann s.n.* 1991 (JE), AJ535529/AJ535551, –, *Euphorbia pseudotuberosa* Pax, South Africa, *P. Bruyns* 12437 (BOL), –, *KF267423; *Euphorbia pterococca* Brot., Spain, *J. Molero* & *A. Rovira* 20/2007 (MICH), KC212348, KC212611; *Euphorbia pubiglans* N.E. Br., South Africa, *R. Becker* 1094 (MICH), –, *KF267424; *Euphorbia pulvinata* Marloth 1, South Africa, *R. Becker* 1306 (MICH), *KF267323, *KF267426; *Euphorbia pulvinata* Marloth 2, South Africa (cultivated), *J. Morawetz* 295 (MICH), *KF267322, *KF267425; *Euphorbia pulvinata* Marloth 3, South Africa, *P. Bruyns* 4383 (BOL), JN207806, –, *Euphorbia purpurea* (Raf.) Fernald, U.S.A., *J. Morawetz* 318 (MICH), KC212351, KC212613; *Euphorbia quadrata* Nel, South Africa, *P. Bruyns* 3936 (BOL), AM040786, *KF267427; *Euphorbia restituta* N.E. Br., South Africa, *R. Becker* 963 (MICH), –, *KF267428; *Euphorbia rubriseminalis* S. Carter ex Boulos, Yemen, *P. Bruyns* 10929 (E), JN207813, –, *Euphorbia scheffleri* Pax 1, U.S.A. (cultivated), *P. Berry* 7877 (MICH), JN250232, JN249220; *Euphorbia scheffleri* Pax 2, U.S.A. (cultivated), *V. Steinmann* 1452 (RSA), –, AF538249; *Euphorbia scheffleri* Pax 3, Kenya, *J. Morawetz* 403 (MICH), –, *KF267429; *Euphorbia schoenlandii* Pax 1, South Africa, *R. Becker* 878 (MICH), JN250234, JN249222; *Euphorbia schoenlandii* Pax 2, South Africa, *P. Bruyns* 6135 (BOL), AM040788, –, *Euphorbia silenifolia* (Haw.) Sweet 1, South Africa, *N. Zimmermann* 9/98 (JE), AJ534721/AJ534731, –, *Euphorbia silenifolia* (Haw.) Sweet 2, South Africa, *R. Becker* 1090 (MICH), –, *KF267430; *Euphorbia smithii* S. Carter, Oman, *J. Morawetz* 336 (MICH), JN250240, JN249227; *Euphorbia socotrana* Balf.f. 1, U.S.A. (cultivated), *P. Berry* 7876 (MICH), JN250241, JN249228; *Euphorbia socotrana* Balf.f. 2, U.S.A. (cultivated), *V. Steinmann* 1436 (RSA), –, AF538248; *Euphorbia sp. nov.*, Angola, *P. Bruyns* 10729 (BOL), JN207820, –, *Euphorbia spinea* N.E. Br., South Africa, *R. Becker* 967 (PRE), JQ750964, JQ750862; *Euphorbia stellispina* Haw., South Africa, *R. Becker* 680 (MICH), *KF267324, *KF267431; *Euphorbia susannae* Marloth 1, South Africa (cultivated), *J. Morawetz* 300 (PRE), *KF267325, *KF267432; *Euphorbia susannae* Marloth 2, South Africa (cultivated), *N. Zimmermann ex cult.* (JE), AJ535531, –, *Euphorbia tirucalli* L., South Africa, *R. Becker* 1065 (MICH), KC019704, KC019850; *Euphorbia trichadenia* Pax 1, U.S.A. (cultivated), *V. Steinmann* 1461 (RSA), AF537564, AF538236; *Euphorbia trichadenia* Pax 2, South Africa, *R. Becker* 1133 (MICH), –, *KF267433; *Euphorbia trichadenia* Pax 3, South Africa, *D. Hardy s.n.* (JE), AJ534722/AJ534732, –, *Euphorbia tuberosa* L. 1, South Africa, *P. Bruyns* 9075 (MO), AM040795, –, *Euphorbia tuberosa* L. 2, U.S.A. (cultivated), *V. Steinmann* 1472C (RSA), AF537570, AF538246; *Euphorbia unispina* N.E. Br., U.S.A. (cultivated), *P. Berry* 7798 (MICH), KC019660, JN249239; *Euphorbia wilmaniae* Marloth 1, South Africa, *R. Becker* 1275 (MICH), *KF267326, *KF267434; *Euphorbia wilmaniae* Marloth 2, Netherlands (cultivated), *R. Riina* 1666 (MA), *KF267327, *KF267435; *Euphorbia wilmaniae* Marloth 3, Netherlands (cultivated), *R. Riina* 1670 (MA), *KF267328, *KF267436; *Neoguillauminia cleopatra* (Baill.) Croizat, New Caledonia, *K. Cameron* 2015 (NY), JN250099, JN249090.