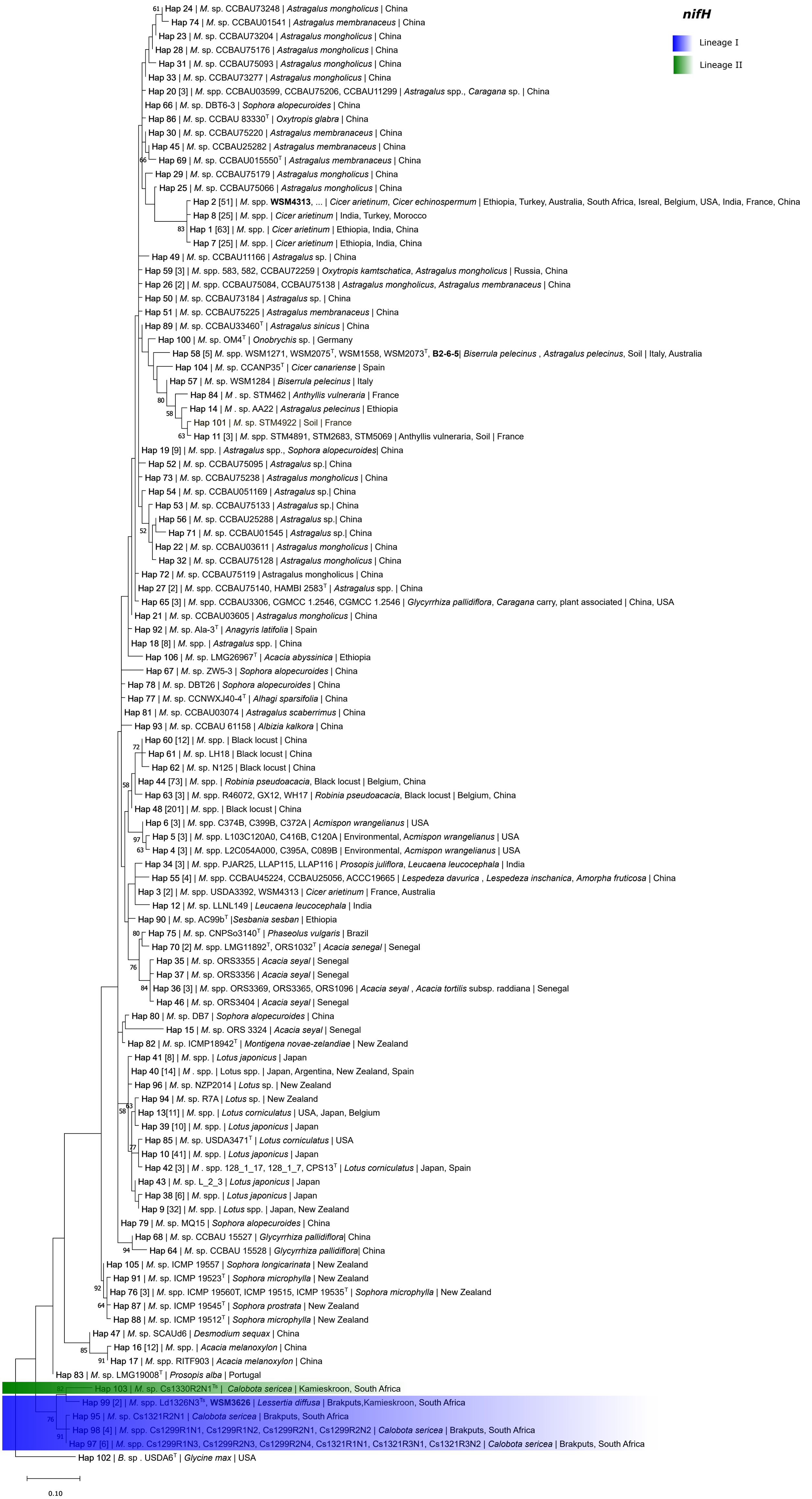
nifH
Lineage I
Lineage II
Hap 24 | M. sp. CCBAU73248 | Astragalus mongholicus | China
Hap 74 | M. sp. CCBAU01541 | Astragalus membranaceus | China
Hap 23 | M. sp. CCBAU73204 | Astragalus mongholicus | China
Hap 28 | M. sp. CCBAU75176 | Astragalus mongholicus | China
Hap 31 | M. sp. CCBAU75093 | Astragalus mongholicus | China
Hap 33 | M. sp. CCBAU73277 | Astragalus mongholicus | China
Hap 20 [3] | M. spp. CCBAU03599, CCBAU75206, CCBAU11299 | Astragalus spp., Caragana sp. | China
Hap 66 | M. sp. DBT6-3 | Sophora alopecuroides | China
Hap 86 | M. sp. CCBAU 83330T | Oxytropis glabra | China
Hap 30 | M. sp. CCBAU75220 | Astragalus membranaceus | China
Hap 45 | M. sp. CCBAU25282 | Astragalus membranaceus | China
Hap 69 | M. sp. CCBAU015550T | Astragalus membranaceus | China
Hap 29 | M. sp. CCBAU75179 | Astragalus mongholicus | China
Hap 25 | M. sp. CCBAU75066 | Astragalus mongholicus | China
Hap 2 [51] | M. spp. WSM4313, ... | Cicer arietinum, Cicer echinospermum | Ethiopia, Turkey, Australia, South Africa, Isreal, Belgium, USA, India, France, China
Hap 8 [25] | M. spp. | Cicer arietinum | India, Turkey, Morocco
Hap 1 [63] | M. spp. | Cicer arietinum | Ethiopia, India, China
Hap 7 [25] | M. spp. | Cicer arietinum | Ethiopia, India, China
Hap 49 | M. sp. CCBAU11166 | Astragalus sp. | China
Hap 59 [3] | M. spp. 583, 582, CCBAU72259 | Oxytropis kamtschatica, Astragalus mongholicus | Russia, China
Hap 26 [2] | M. spp. CCBAU75084, CCBAU75138 | Astragalus mongholicus, Astragalus membranaceus | China
Hap 50 | M. sp. CCBAU73184 | Astragalus sp. | China
Hap 51 | M. sp. CCBAU75225 | Astragalus membranaceus | China
Hap 89 | M. sp. CCBAU33460T | Astragalus sinicus | China
Hap 100 | M. sp. OM4T | Onobrychis sp. | Germany
Hap 58 [5] M. spp. WSM1271, WSM2075T, WSM1558, WSM2073T, B2-6-5| Biserrula pelecinus , Astragalus pelecinus, Soil | Italy, Australia
Hap 104 | M. sp. CCANP35T | Cicer canariense | Spain
Hap 57 | M. sp. WSM1284 | Biserrula pelecinus | Italy
Hap 84 | M . sp. STM462 | Anthyllis vulneraria | France
Hap 14 | M . sp. AA22 | Astragalus pelecinus | Ethiopia
Hap 101 | M. sp. STM4922 | Soil | France
Hap 11 [3] | M. spp. STM4891, STM2683, STM5069 | Anthyllis vulneraria, Soil | France
Hap 19 [9] | M. spp. | Astragalus spp., Sophora alopecuroides| China
Hap 52 | M. sp. CCBAU75095 | Astragalus sp.| China
Hap 73 | M. sp. CCBAU75238 | Astragalus mongholicus | China
Hap 54 | M. sp. CCBAU051169 | Astragalus sp.| China
Hap 53 | M. sp. CCBAU75133 | Astragalus sp.| China
Hap 56 | M. sp. CCBAU25288 | Astragalus sp.| China
Hap 71 | M. sp. CCBAU01545 | Astragalus sp.| China
Hap 22 | M. sp. CCBAU03611 | Astragalus mongholicus | China
Hap 32 | M. sp. CCBAU75128 | Astragalus mongholicus | China
Hap 72 | M. sp. CCBAU75119 | Astragalus mongholicus | China
Hap 27 [2] | M. spp. CCBAU75140, HAMBI 2583T | Astragalus spp. | China
Hap 65 [3] | M. spp. CCBAU3306, CGMCC 1.2546, CGMCC 1.2546 | Glycyrrhiza pallidiflora, Caragana carry, plant associated | China, USA
Hap 21 | M. sp. CCBAU03605 | Astragalus mongholicus | China
Hap 92 | M. sp. Ala-3T | Anagyris latifolia | Spain
Hap 18 [8] | M. spp. | Astragalus spp. | China
Hap 106 | M. sp. LMG26967T | Acacia abyssinica | Ethiopia
Hap 67 | M. sp. ZW5-3 | Sophora alopecuroides | China
Hap 78 | M. sp. DBT26 | Sophora alopecuroides | China
Hap 77 | M. sp. CCNWXJ40-4T | Alhagi sparsifolia | China
Hap 81 | M. sp. CCBAU03074 | Astragalus scaberrimus | China
Hap 93 | M. sp. CCBAU 61158 | Albizia kalkora | China
Hap 60 [12] | M. spp. | Black locust | China
Hap 61 | M. sp. LH18 | Black locust | China
Hap 62 | M. sp. N125 | Black locust | China
Hap 44 [73] | M. spp. | Robinia pseudoacacia, Black locust | Belgium, China
Hap 63 [3] | M. spp. R46072, GX12, WH17 | Robinia pseudoacacia, Black locust | Belgium, China
Hap 48 [201] | M. spp. | Black locust | China
Hap 6 [3] | M. spp. C374B, C399B, C372A | Acmispon wrangelianus | USA
Hap 5 [3] | M. spp. L103C120A0, C416B, C120A | Environmental, Acmispon wrangelianus | USA
Hap 4 [3] | M. spp. L2C054A000, C395A, C089B | Environmental, Acmispon wrangelianus | USA
Hap 34 [3] | M. spp. PJAR25, LLAP115, LLAP116 | Prosopis juliflora, Leucaena leucocephala | India
Hap 55 [4] | M. spp. CCBAU45224, CCBAU25056, ACCC19665 | Lespedeza davurica , Lespedeza inschanica, Amorpha fruticosa | China
Hap 3 [2] | M. spp. USDA3392, WSM4313 | Cicer arietinum | France, Australia
Hap 12 | M. sp. LLNL149 | Leucaena leucocephala | India
Hap 90 | M. sp. AC99bT |Sesbania sesban | Ethiopia
Hap 75 | M. sp. CNPSo3140T | Phaseolus vulgaris | Brazil
Hap 70 [2] M. spp. LMG11892T, ORS1032T | Acacia senegal | Senegal
Hap 35 | M. sp. ORS3355 | Acacia seyal | Senegal
Hap 37 | M. sp. ORS3356 | Acacia seyal | Senegal
Hap 36 [3] | M. spp. ORS3369, ORS3365, ORS1096 | Acacia seyal , Acacia tortilis subsp. raddiana | Senegal
Hap 46 | M. sp. ORS3404 | Acacia seyal | Senegal
Hap 80 | M. sp. DB7 | Sophora alopecuroides | China
Hap 15 | M. sp. ORS 3324 | Acacia seyal | Senegal
Hap 82 | M. sp. ICMP18942T | Montigena novae-zelandiae | New Zealand
Hap 41 [8] | M. spp. | Lotus japonicus | Japan
Hap 40 [14] | M . spp. | Lotus spp. | Japan, Argentina, New Zealand, Spain
Hap 96 | M. sp. NZP2014 | Lotus sp. | New Zealand
Hap 94 | M. sp. R7A | Lotus sp. | New Zealand
Hap 13[11] | M. spp. | Lotus corniculatus | USA, Japan, Belgium
Hap 39 [10] | M. spp. | Lotus japonicus | Japan
Hap 85 | M. sp. USDA3471T | Lotus corniculatus | USA
Hap 10 [41] | M. spp. | Lotus japonicus | Japan
Hap 42 [3] | M . spp. 128_1_17, 128_1_7, CPS13T | Lotus corniculatus | Japan, Spain
Hap 43 | M. sp. L_2_3 | Lotus japonicus | Japan
Hap 38 [6] | M. spp. | Lotus japonicus | Japan
Hap 9 [32] | M. spp. | Lotus spp. | Japan, New Zealand
Hap 79 | M. sp. MQ15 | Sophora alopecuroides | China
Hap 68 | M. sp. CCBAU 15527 | Glycyrrhiza pallidiflora| China
Hap 64 | M. sp. CCBAU 15528 | Glycyrrhiza pallidiflora| China
Hap 105 | M. sp. ICMP 19557 | Sophora longicarinata | New Zealand
Hap 91 | M. sp. ICMP 19523T | Sophora microphylla | New Zealand
Hap 76 [3] | M. spp. ICMP 19560T, ICMP 19515, ICMP 19535T | Sophora microphylla | New Zealand
Hap 87 | M. sp. ICMP 19545T | Sophora prostrata | New Zealand
Hap 88 | M. sp. ICMP 19512T | Sophora microphylla | New Zealand
Hap 47 | M. sp. SCAUd6 | Desmodium sequax | China
Hap 16 [12] | M. spp. | Acacia melanoxylon | China
Hap 17 | M. spp. RITF903 | Acacia melanoxylon | China
Hap 83 | M. sp. LMG19008T | Prosopis alba | Portugal
Hap 103 | M. sp. Cs1330R2N1Ts | Calobota sericea | Kamieskroon, South Africa
Hap 99 [2] | M. spp. Ld1326N3Ts, WSM3626 | Lessertia diffusa | Brakputs,Kamieskroon, South Africa
Hap 95 | M. sp. Cs1321R2N1 | Calobota sericea | Brakputs, South Africa
Hap 98 [4] | M. spp. Cs1299R1N1, Cs1299R1N2, Cs1299R2N1, Cs1299R2N2 | Calobota sericea | Brakputs, South Africa
Hap 97 [6] | M. spp. Cs1299R1N3, Cs1299R2N3, Cs1299R2N4, Cs1321R1N1, Cs1321R3N1, Cs1321R3N2 | Calobota sericea | Brakputs, South Africa
Hap 102 | B. sp . USDA6T | Glycine max | USA
0.10