

Alignment 1: nrDNA ITS (data set 1)

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          10          20          30          40          50          60          70          80          90         100
          |          |          |          |          |          |          |          |          |          |
Ajania pacifica      TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Arctanthemum arcticum TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Chrysanthemum coreanum TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Artemisia vulgaris   TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Leucanthemella serotina TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Nipponanthemum nipponicum TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Hippolytia dolichophylla TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Cymbopappus adenosolen TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGTGTGAG--AGG-ACCAAGCTCTT--GTTTGATC-CTCTCGACGCTTT-
Lepidophora repandum TCGAACCTGCAAAGCAGAACGACCCGTGAA--CAAGTAAAACAAAC-GAGCGTCGAG--CGG-ATTAGGCACTT--GTTTGGTC-CTCTCGATGCTTT-
Lonas annua          TCGAATCCTGCAAAGCAGAACATCTGTGAA--CATGTAATAATGAC-GAGCGTTGAG--TGG-ATTAAGCACTA--GATTGATC-CTCTCGGCGCTTT-
Glebionis coronaria  TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATAATAACCGAGCGCCGAG--TGG-GTTAAGCGYTT-TGTTTGATC-CTCTCGGTGCTTT-
Ismelia carinata     TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATAATAACCGAGRCRCCGAG--TGG-GTTAAGCGYTT-TGTTTGATC-CTCTCGGTGCTTT-
Argyranthemum foeniculaceum TCGAACSTGCAAAGCAGAACGACCCGTGAA--CACGTAAATAATAACCGAGCACCAG--TGG-GTTAAGCGYTT-TGTTTGATC-CTCTCGGTGCTTT-
Heteranthemis viscidahirta TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATAATAACCGAGCACCAG--TGG-GTTAAGCACTT-TGTTTGATC-CTCTCGGTGCTTT-
Aaronsohnia pubescens TCGAACCTGCAAAGCAGAACGACCCGCGAA--CACGTAAATAATAATGAGCGCCGAG--TGG-GTTAAGCACTT-TGTTTGATC-CTCTCGGTGCTTT-
Nivellea nivellei    TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATAATACTGAGCGCTGAG--TGG-GTTAAGCACTT-TGTTTGATC-CTCTCGGTGCTTT-
Chamaemelum nobile   TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAATAAC-GAGCGTCGAG--TGG-ATTAAGCGYTT--GTTTGATC-CTCTCGATGCTTT-
Cladanthus arabicus  TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGC-TCGAG--TGG-GTTAAGCACTT--GTTTGATC-CTCTCGATGCTTT-
Rhinolepis lonadioides TCGAACCTGCAAAGCAGAACGACCCGTGAA--CAAGTAAAA-CAATCGAGTGTGAG--AAG-ATCAAGCACTT--GTTTGATC-CTTTGATGCTTT-
Mecomischus halimifolia TCGAACCTGCAAAGCAGAACGACCCGTGAA--CAAGTAAAAACAACCGAGCATTAG--TGG-ATCAAGCACTT--GTTTGATC-CTCTCGATGCTTT-
Santolina rosmarinifolia TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGCATCGAG--TGG-ATTGAGCACTT--GTTTGATC-CTCTCGATGCTTT-
Endopappus macrocarpus TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATAACAATGGAGTGTGAG--TGG-GTTAAGCACTT--GTTTGATC-CTCTCGATGCTTT-
Leucanthemopsis alpine TCGAACCTGCAAAGCAGAACGACCCGCGAA--CACGTAAAA-CAAACGAGCGTCGAG--TGG-ATTAAGCACTA--GTTTGATC-CGCTTGATGCTTT-
TCAAACCTGCAAAGCAGAACGACCCGCGAA--CACGTAAAA-CAAACGAGCGTCGAG--TGGGATTAAG-----ATC-CGCTTGACGCTTT-
Hymenostemma pseudanthemis TCGAACCTGCAAAGCA--CGACCCGCGAA--CACGTAAAA-CAAACAAGCGTCGAG--TGG-ATTAAGCACTT--GTTTGATC-CGCTTGATGCTTT-
Castrilanthemum debeauxii TCGAACCTGCAAAGCAGAACGACCCGCGAA--CACGTAAAAACAACCGAGCGTCGAG--TGG-ATTAAGCACTT--GTTTGATC-CGCTTGATGCTTT-
Rhodanthemum hulgariense TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATA-CAACCAAGCGTCGAG--TGG-GTTAAGCGYTT--GTTTGATC-CTCTCGATGCTTT-
Leucanthemum vulgare TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATA-CAACCGAGCGTCGAG--TGG-GTTAAGCGYTT--GTTTGATC-CTCTCGATGCTTT-
Mauranthemum gaetulum TCGAACCTGCAAAGCAGAACGACCTGTGAA--CACGTAAATA-TAATCGAGCGTCGAG--TGG-ATTAAGCTCTT--GTTTGATC-CTCTCGATGCTTT-
Plagiopus fontanesii TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAACA-CAATCGAGCGTCGAG--TGG-GTTAAGCGYTT--GTTTGATC-CTCTCGATGCTTT-
Coleostephus myconis TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATA-CAATCGAGCGTCGAG--TGG-GTTAAGCGYTT--GTTTGATC-CTCTCGATGCTTT-
Chrysanthoglossum deserticola TCGAACCTGCAAAGCAGAACGACCCGTGAA--CATGTAATA-CAATGAGCGTCGAG--TTG-GTTAAGCGYTT--GTTTGATC-ATCTTGATGCTTT-
Glossopappus macrotus TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATA-CAATGAGCGTCGAG--TGG-GTTAAGCGYTT--GTTTGATC-CTCTCGATGCTTT-
Otospermum glabrum TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATA-CAATGAGCGTCGAG--TTG-GTTAAGCACTT--GTTTGATC-ATCTCGATGCTTT-
Heteromera fuscata TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAATA-CAACCGAGCGTCGAG--TGG-GTCAAGCACTT--GTTTGATC-CTCTCGATGCTTT-
Chlamydochloa tridantata TCGAACCTGCAAAGCAGAACGACCTGTGAA--CACGTAAATA-CAACCGGCGTCGAG--TGG-GTTAAGCATAT--GTTTGATC-CTCTTGATGCTTT-
Anthemis cretica TCGAACCTGCAAAGCAGAACGACCCGTGAA--CATGTAATA-CAATGAGCGTCGAG--TGA-ATTAAGGT-TT--GTTTGATGACTGCTGCT-
Anthemis odontostephana TCGAACCTGCAAAGCAGAACGACCCGTGAA--CGCGTAAAA-CAACCGAGCGTCGAG--TGG-AATGAGCACTT--GTTTGATC-CCCTCGATGCTCT-
Anthemis chia TCGAACCTGCAAAGCAGAACGACCCGTGAA--CGCGTAAAA-CAACCAAGCGTCGAG--TGG-ATTAAGCACTT--GTTTGGTC-CTCTCGATGCTTT-
Tripleurospermum perforatum TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGCGTCGAGAGTGG-ACCAAGGA-AT--TTTGAATACACTCGATGCTTT-
Cota rigescens TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGCGTCGAG--TGG-ATTAAGCACTT--GTTTGATC-CTCTCGATGCTTT-
Gonospermum fruticosum TCGAACCTGCAAAGCAGAATGACCCGTGAANGCAGTAAAAACAACCGAGCATCGAG--TTG-ATTAAGCACTA--GTTTGATC-CTCTTGATGCTTT-
Lugoa revolute TCGAACCTGCAAAGCAGAATGACCCGTGAA--CACGTAAAAACAACCGAGCATCGAG--TTG-ATTAAGCACTT--GTTTGATC-CTCTTGATGCTTT-
Tanacetum corymbosum TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGCGTCGAG--TGG-ATTAAGCACTT--GTTTGATC-CTCTTGATGCTTT-
Anacyclus radiatus TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGCATCGAG--TGG-ATTAAGGATTT--TTCTGATCAC-CTCGATGCTCT-
Heliocauta atlantica TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAAC-AGCGTCGAG--TGC-GTTAAGCACTT--GTTTGATC-CTCTCGATGCTTT-
Otanthus maritimus TCGAACCTGCAAAGCAGAACGACCCGTGAA--CATGTAATA-CAATCGAGCGTCGAG--TGG-ATCAAGCACTT--GTTTGATC-CTCTTGATGCTTT-
Achillea ptarmica TCGAACCTGCAAAGCAGAACGACCCGTGAA--CACGTAAAAACAACCGAGCGTCGAG--TGG-ATTAAGCTTTT--GTTTGGTC-CTCTCGATGCTTT-
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Rhedinolepis lonadioides ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCACGACG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Mecomischnus halimifolia ATATTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Santolina rosmarinifolia ATCTATGT-----CGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Endopappus macrocarpus ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Leucanthemopsis alpine AACTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCACGGCG-CGGTTGTCCAAAATATG-TTTTCC-TTCGATGGA-CGCAC
Prolongoa hispanica AACTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCACGGCG-CGGTTGTCCAAAATATG-TTTTCC-TTCGATGGA-CGCAC
Hymenostemma pseudanthemis AACTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCACGGCG-CGGTTGTCCAAAATATG-TTTTCC-TTC-ATGGA-CGCAC
Castrilanthemum debeauxii ATCTTTGA-----TGGGGGCGGATATTGGTCTCCCGTGCTCACGGCG-CGGTTGGCCGAAATAGG-AGCTCC-TTCGATGGA-AGCAC
Rhodanthemum hosmariense ATATTTGT-----AGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-AGCAC
Leucanthemum vulgare TTATTTGTT-----AGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Mauranthemum gaetulum TTATTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAAG-AGTCCC-TTCGATGGA-CGCAC
Plagiopus fontanesii TTATTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Coleostephus myconis GTATTTGT-----CGAGGGCGGATATTGGTCTCCCGTGCTCATGGCGATGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Chrysanthoglossum deserticola TTATTTGT-----TGGGG-CGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGTATCGAAAATAAG-AGTCCC-TTCGATGGA-CGCAC
Glossopappus macrotus TTATTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAAG-AGTCCC-TTCGTTGGA-AGCAC
Otospermum glabrum GTATTTGT-----CGGGG-CGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Heteromera fuscata ATTTTGT-----CGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Chlamydomorpha tridantata ATCATTTGT-----TAGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATATG-AGTCCC-TTCGTTGGA-CGCAC
Anthemis cretica ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Anthemis odontostephana A-CTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGCG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Anthemis chia ATCTTTGT-----TGGGGGCGGATATTGGTGGCCCGTGCCCATGGTG-TGGTTGGCCGAAATAAG-AGTCCC-TTCGATGGA-TGCAC
Tripleurospermum perforatum ATATTTGT-----TGGGGACGGATATTGGTTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAAG-AGTCCC-TTCGATGGA-CGCAT
Cota rigescens ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAAG-AGTCCC-TTCGATGGA-CGCAC
Gonospermum fruticosum ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Lugoa revolute ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Tanacetum corymbosum ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-TGCAC
Anacyclus radiatus ATCTTTGT-----TGGGAGCGGATATTGGTCTCCCGTGCTTATTGGC-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Helioautica ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAT
Otanthus maritimus ATCCATGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CACAC
Achillea ptarmica ATCTCTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Matricaria discoidea A-CTATGT-----TGGGGGCGGATATTGGTCTCCCGTGCTTATTGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGATGGA-CGCAC
Brocchia cinerea ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAGG-AGTCCC-TTCGACGGG-CGCAC
Phalacrocarpum oppositifolium ATCTTTGT-----TGGGGGCGGATATTGGTCTCCCGTGCTCATGGTG-TGGTTGGCCGAAATAAG-AGTCCC-TTCGACGGA-CGCAC
Athanasia crithmifolia TTCTTTGTTTAGAGAATCTGTGGGTTGGGGGCGGAAATTGGTCTCCCGTGCTCACGGCG-TGGTTGGCCGAAATAGG-AGTCCCCTTCGATGGA-CGCGC
Inulanthera calva CTCTCTAAGAGG--ATTTGTTGTTGGGGGCGGATATTGGTCTCCCGTACTCACGGTG-TGGTTGGCCGAAATAGG-AGTCCCCTTCGATGGA-CGCAC
Ursinanthemoides CTCTTTTAAAGG--ATGCGATGCTGGGGGCGGATATTGGTCTCCCGTGCTCACGGCG-TGGTTGGCCGAAATAGG-AGTCCCCTTCGATGGA-CGCAC
Cotula coronopifolia TCCCTTTGTTAAGG--CACGTGATCCGGGAGCGGAGATTGGACTCCCGTGCTCATGGTG-CGGCTGTCCGAAATAAG-AGTCCCCTTCGATGGA-CGCAC
Leptinella serrulata ATCACTGTTAAGG---TGTATGATCCGGGAGCGGAGATTGGACTCCCGTGCTCATGGCT-CGGTTGTCTAAAATAGG-AGTCCCCTTCGATGGA-CGCAC

410 420 430 440 450 460 470 480 490 500

Ajania pacifica GAACTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--CACTTTAAAAACCCCAATGTGTCGCTCT-TGA
Arctanthemum arcticum GAACTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--CTCTTTAAAAACCCCAATGTGTCGCTCT-TGA
Chrysanthemum coreanum GAACTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--CTCTTTAAAAACCCCAATGTGTCGCTCT-TGA
Artemisia vulgaris GAACTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--CTCTTTAAAAACCCCAATGTGTCGCTCT-TGA
Leucanthemella serotina GAACTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--GCTCTTTAAAAACCCCAATGTGTCGCTCTTTTGA
Nipponanthemum nipponicum AAACCTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--CTCTTTAAAAACCCCAATGTGTCGCTCTTT-TGA
Hippolytia dolichophylla GAACTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--CTCTTTAAAAACCCCAATGTGTCGCTCTTT--GA
Cymbopappus adenosolen GAACTAGTGGTGGTTCGTAATAAACCCCTCGTCTTTTGT--TCGTGCTGTGCTCGC-AAGGTAATA--GCTCTTTCAAGTACCCTAACGTGTTGCTCTTT-CGA

Lepidophora repandum AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Lonas annua AAACAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCCGTCTCTCGC-AAGGGAA-CA-CTCTTCAAGTAACCCAGCGCATCGTCTAA-GGA
Glebionia coronaria AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Ismelia carinata AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Argyranthemum foeniculaceum AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Heteranthemis viscidohirta AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Aaronsohnia pubescens AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Nivellea nivellei AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Chamaemelum nobile AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Cladanthus arabicus AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Rhetinolepis lonadioides AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Mecomischus halimifolia AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Santolina rosmarinifolia AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Endopappus macrocarpus AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Leucanthemopsis alpine AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Prolongoa hispanica AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Hymenostemma pseudanthemis AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Castrilanthemum debeauxii AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Rhodanthemum hosmariense AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Leucanthemum vulgare AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Mauranthemum gaetulum AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Plagiopus fontanesii AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Coleostephus myconis AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Chrysanthoglossum deserticola AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Glossopappus macrotus AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Otospermum glabrum AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Heteromera fuscata AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Chlamydomorpha tridantata AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Anthemis cretica GAACAAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Anthemis odontostephana GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Anthemis chia GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Tripleurospermum perforatum GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Cota rigescens GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Gonospermum fruticosum GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Lugoa revolute GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Tanacetum corymbosum GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Anacyclus radiatus GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Heliocauta atlantica GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Otanthus maritimus GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Achillea ptarmica GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Matricaria discoidea GAACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Brocchia cinerea AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Phalacrocarpum oppositifolium AAAGTGGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Athanasia crithmifolia -AACTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Inulanthera calva GA-CTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Ursinia anthemoides GA-CTAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Cotula coronopifolia GA-TAAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA
Leptinella serrulata GA-TAAGTGGTGGTAAACCCCTCGTTCCTTTGTT--TTGTGCTGTATCTCTCATTAGGAAA---CTCT---AATACCC--AATGTGTTGTTTTA-GGA

	510	520	530	540	550	560
Ajania pacifica	CGACGCTTCGACC1111000000000100011000111110111110111110N011110					
Arctanthemum arcticum	CGACGCTTCGACC1111000000000100011000111110111110111110N011110					
Chrysanthemum coreanum	CGACGCTTCGACC1111000000000100011000111110111110111110N011110					
Artemisia vulgaris	CGACGCTTCGACC1111000000010100011000111110111110111110N011110					
Leucanthemella serotina	CGACGCTTCGACC1111000000000100001000111110111110111110N111111					
Nipponanthemum nipponicum	CGACGCTTCGACC1111000000000100001000111110111110111110N011110					
Hippolytia dolichophylla	CGACGCTTCGACC1111000000000100001000111110111110111110N011110					
Cymbopappus adenosolen	TGACGCTTCGACA1111100000000100001000111010111110111110N111110					
Lepidophora repandum	TGACGCTTCGACC110100000000010000100010NN1011111111110N0N1100					
Lonas annua	TGATGCTTCGACC110100000000110000101010NN10111110111011011110					
Glebionis coronaria	TGACGCTTCGACC111110000000010010000010NN10111110111011011110					
Ismelia carinata	TGACGCTTCGACC111110000000010010000010NN10111110111011011110					
Argyranthemum foeniculaceum	TGACGCTTCGACC111110000000010010100010NN10111110111011011110					
Heteranthemis viscidehirta	TGACGCTTCGACC111110100000010010000010NN10111110111011011110					
Aaronsonhia pubescens	TGATGCTTCGACC111110000000010010100010NN10111110101110111110					
Nivellea nivellei	TGACGCTTCGACC111110000000010010100010NN10111110101110111110					
Chamaemelum nobile	TGACGCTTCGACC110100000000010000100010NN10111111001111011110					
Cladanthus arabicus	TGACGCTTCGACC111100000000000000100010NN101011111001111011110					
Rhedinolepis lonadioides	TGACGCTTCGACC011100010000100001100010NN10111111001111011110					
Mecomischnus halimifolia	TGACGCTTCGACC111100010000010001100010NN10111111001111011110					
Santolina rosmarinifolia	TGACGCTTCGACC111100010000010000100010NN10111111101111011110					
Endopappus macrocarpus	TGACGCTTCGACC111100000000010000100010NN101111100101111011110					
Leucanthemopsis alpine	TGATGCTTCGACC011100000000010000100010NN10101110110NNNN10N10					
Prolongoa hispanica	TGACGCTTCGACC0111NN00000000010000100010NN10101110110NNNN00N10					
Hymenostemma pseudanthemis	TGACGCTTCGACC011100000000010000100010NN10101010110110NNNN00N10					
Castrilanthemum debeauxii	TGACGCTTCGACC111100000000010000100010NN101110110100NNNN10N10					
Rhodanthemum hosmariense	CGATGCTTCGACC011100000000010000100010NN10111110101111011110					
Leucanthemum vulgare	CGATGCTTCGACC011100000000010000100010NN10111110101111011110					
Mauranthemum gaetulum	CGACGCTTCGACC011100000000010000100010NN10111110101111011110					
Plagius fontanesii	CGACG-TTCGACC0111000100000010000100010NN10111110101111011110					
Coleostephus myconis	CGACGCTTCGACC011100100000010000100010NN101111010101111011110					
Chrysanthoglossum deserticola	TGATGCTTCGACC011100000000010110100010NN00111110101111011010					
Glossopappus macrotus	TGACTCTTCGACC011100000000010110100010NN10111110111110111010					
Otospermum glabrum	TGACGCTTCGACC011100000001010010100010NN00111110101111011110					
Heteromera fuscata	CAATGCTTCGACC011100000000010000100010NN10111110101111011110					
Chlamydomphora tridantata	TGACGCTTCGACC011100000000010000100010NN101111NN0101111011110					
Anthemis cretica	CGACGCTTCGACC011001000000010000100010NN10110N110101111011110					
Anthemis odontostephana	TGATGCTTCGACC011100000000010000100000NN10110N110101111011110					
Anthemis chia	TGACGCTTCGACC011100000000010000100010NN10110N110101111011110					
Tripleurospermum perforatum	TGATGCTTCGACC111001000000010000100010NN10110N110101111011100					
Cota rigescens	TGACGCTTCGACC111100000000010000100010NN10110N110101111011110					
Gonospermum fruticosum	TGACGCTTCGACC111100000000010000100010NN10110N110101111011111					
Lugoa revolute	TGACGCTTCGACC111100000000010000100010NN10110N110101111011110					
Tanacetum corymbosum	TGACGCTTCGACC111100000000010000100010NN10110N110101111011111					
Anacyclus radiatus	TGACGCTTCGACC111101000000010000100010NN10110N110101111011110					
Heliocauta atlantica	TGACGCTTCGACC111100000000010000100010NN10110N110101111011110					
Otanthus maritimus	TGATGCTTCGACC011100000110010000100010NN10110N110111110011110					
Achillea ptarmica	TGACGCTTCGACC111100000110010000100010NN10110N110101111011110					
Matricaria discoidea	TGACGCTTCGACC111100000000010000100000NN10111110101011111100					
Brocchia cinerea	TGATGCTTCGACC111100000000010000100010NN10111110101111011110					

Phalacrocarpum oppositifolium TGATGCTTCGACC1111000010000100001000010NN10111111010111101111011110
 Athanasia crithmifolia CGATGCTTGGATA111110001000010000101111111111111111111010111101111011110
 Inulanthera calva CGACACTTCGACC1111000010000100001111101011111011111011111111111110
 Ursinia anthemoides CGACGCTTCGACC111100001101010001111110111011111011101111111111
 Cotula coronopifolia CGACGCTTCGACT101100000001011000111111001101111101111110111100
 Leptinella serrulata CGATGCTTCGACC10110000000101100011111100110111110111111011111011110

Alignment 2: cpDNA trnl-trnf IGS (data set 2)

	10	20	30	40	50	60	70	80	90	100
Tripleurospermum perforatum	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Pentzia flabelliformis	NNNNNNNAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Otanthus maritimus	TCCCC-AAAAAGGCCTTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Anthemis cretica	TCCCCAAAAAGACCATTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Tanacetum corymbosum	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Achillea ptarmica	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Matricaria discoidea	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTATCGGT	-TCAAAATTA						
Artemisia vulgaris	TCCCC-AAAAAGACCGTTT-ACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTAGTTAGCGGT	-TCAAAATTC						
Brocchia cinerea	TCCCC-AAAAAGACCGTTT-ACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Aaronsohnia pubescens	TCCCC-AAAAAGGCCGTTTTATTCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCATTAGCGGT	-TCAAAATTC						
Nivellea nivellei	TCCCC-AAAAAGGCCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TTTTGTTTTTCATTAGCGGT	-TCAAAATTC						
Otospermum glabrum	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTA	-----						
Cladanthus arabicus	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Rhedinia lonadioides	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCAGT	-TCCAAATTC						
Mecomischus halimifolius	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCAGT	-TCCAAATTC						
Chamaemelum nobile	TCCCC-AAAAAGACCGTTTGACTACCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCAGT	-TCCAAATTC						
Santolina rosmarinifolia	TCCCC-AAAAAGACCATTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Glebionis coronaria	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCATTAGCGGT	-TCAAAATTC						
Heteranthemis viscidhirta	TCCCC-AAAAAGACCGTTTGACTTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCATTAGCGGT	-TCAAAATTC						
Argyranthemum adauctum	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCATTAGCGGT	-TCAAAATTC						
Lepdophorum repandum	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----ATCCTTTTGATTATCTGTATTTATCTTGTTTTTCATTAGCGGT	-TAAAAATTC							
Lonas annua	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTATTTATCTTTTTTTTT	-----TTTTTCATTATCGGG	-TCAAAATTC						
Glossopappus macrotus	TCCCC-AAAAAGACCGTTTGACTCCCGAANNNNNATTGTA	-----TCCTTTTGATTTA	-----TCT-GTTTTGCGTAAGCGGTCTCAAAATTC							
Mauranthemum gaetulum	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTGCGTTAGCGGT	-TCCAAATTC						
Plagiopus fontanesii	TCCCCAAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTGCGTTA	-CGGT-TCAAAATTC						
Rhodanthemum hosmariense	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTGCGTTAGCGGT	-TCAAAATTC						
Chrysanthoglossum deserticola	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTGCGTTAGCGGT	-TCAAAATTC						
Chlamydomphora tridentata	TCCCC-AAAAAGACCGTTTGACTTCCCTAATTCCTTTATTGTA	-----TCCTTTTATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTC						
Leucanthemum vulgare	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTGCGTTAGTGGT	-TCAAAATTC						
Coleostephus myconis	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTGCGTTAGCGGT	-TCAAAATTC						
Heteromera fuscata	TCCCC-AAAAAGACCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TCTTGTTTTTCGTTAGCGGT	-TCAAAATTA						
Leucanthemopsis alpine	TCCCC-AAAAAGAC-GTTTGACTCCCTAATTCCTTTATTGTA	-----TACTTTTGATTTA	-----TTTTGTTTTTGTAGTGGT	-TCAAAATTC						
Prolongoa hispanica	TCCCC-AAAAAGGCCGTTTGACTCCCTAATTCCTTTATTGTA	-----TCCTTTTGATTTA	-----TTTTTGTAGTGT	-TCAAAATTC						

Castrilanthemum debeauxii TCCCC-AAAAAGACCGTTTGACTCCCTAATTCTTTATGTATGTATCCCTTTGATTTA-----TCTTGTTTTTCGTTAGTGGT-TCAAAATTC
 Phalacrocarpum oppositifolium TCCCC-AAAAAGACCGTTTGACTCCCTAATTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGCGGT-TCAAAATTC
 Anacyclus radiatus TCCCC-AAAAAGACCGTTTGACTCCCTAATTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGCGGT-TCAAAATTC
 Chrysanthemum indicum NNNNNNNNAAAGACCGTTTGACTCCCTAATTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCATTAGCGGT-TCAAAATTC
 Ismelia carinata NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTATGTGTA----TCCTTTTGATTTA-----ATTTATCTTGTTTTTCATTAGCGGT-TCAAAATTC
 Endopappus macrocarpus NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNATG-A----TCCTTTTGATTTA-----TCTTGTTTTTCATTATCAGT-TCAAAATTC
 Leucanthemella serotina NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTAATGAC----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGCGGT-TCAAAATTC
 Cota rigescens NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGCGGT-TCAAAATTC
 Lugoa revolute NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGCGGT-TCAAAATTC
 Hymenostemma serotina NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNTTCTTTATGTGTA----TCCTTTTGATTTG-----ATTTA-----TACGTGGT-TCAAAATTC
 Hippolytia dolichophylla NNNNNNNNNNNNNNNNNNNNNNNNTAATTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGCGGT-TCAAAATTC
 Gonospermum fruticosum NNNNNNNNNNNNNNNNNNGACTCCCTAATTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGCGGT-TCAAAATTC
 Heliocaute atlantica NNNNNNNNNNNNNNNNGACTGACTACTAATTCTTTATGTGTA----TCCTTTTGATTTA-----TCTTGTTTTTCGTTAGTGGT-TCAAAATTC

110 120 130 140 150 160 170 180 190 200

.....|.....|.....|.....|.....|.....|.....|.....|.....|.....|
 Tripleurospermum perforatum CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Pentzia flabelliformis CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Otanthus maritimus CTTATTTTCC----CATTCACTACT-----AATTATACAAA-----
 Anthemis cretica CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----GG
 Tanacetum corymbosum CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Achillea ptarmica CTTAT-----ACTCTTTATA----CAATTATACAAA-----
 Matricaria discoidea CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Artemisia vulgaris CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Brocchia cinerea CTTATCTTTCC----CATTCACTACTCTTTATA----GAATTATACAAA-----
 Aaronsohnia pubescens CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Nivellea nivellei CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Otospermum glabrum -----
 Cladanthus arabicus CTTATCTTTCCCTTTCCCATTCACTACTCTTTATACA-TACAATTATACAAA-----TTA-----TAC
 Rhetinolepis lonadioides CTTATCTTTCC----CATTCACTACTCTTTATACAATACAATTATACAAA-----
 Mecomischus halimifolius CTTATCTTTCC----CATTCACTACTCTTTATACAATACAATTATACAAA-----
 Chamaemelum nobile CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Santolina rosmarinifolia CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Glebionis coronaria CTTATCTTTCC----CATTCACTACTGTTTATA----CAATTATACAAA-----
 Heteranthemis viscidhirta CTTATCTTTCC----CATTCACTACTGTTTATA----CAATTATACAAA-----
 Argyranthemum adauctum CTTATCTTTCC----CATTCACTACTGTTTATA----CAATTATACAAA-----
 Lepdophorum repandum CTTATCTTTCC----CATT-----TATA----CAATTATACAAA-----
 Lonas annua CTTATCTTTCC----CATT-----TATA----CAATTATACAAA-----
 Glossopappus macrotus CTTATCTTTCC----CATTCANNN-CTTTATA----TAATTATACAAA-TCCTTA-----TACAATTA-----TAC
 Mauranthemum gaetulum CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAAATCTTTA-----TACAATTA-----TAC
 Plagiopus fontanesii CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----TAC
 Rhodanthemum hosmariense CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Chrysanthoglossum deserticola CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Chlamydomphora tridentata CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Leucanthemum vulgare CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Coleostephus myconis CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Heteromera fuscata CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Leucanthemopsis alpine CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----TAC
 Prolongoa hispanica CTTATCTTTCC----CATTCACTACTCTTTATA----GAATTATACAAA-----TAC
 Castrilanthemum debeauxii CTTATCTTTCC----CATTCACTACTCTTGATA----CAATTATACAAAATACAAATGATACAATTATACAAAATGATACAATTATACAAAATACAAATAC
 Phalacrocarpum oppositifolium CTTATCTTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----

Anacyclus radiatus CTGATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Chrysanthemum indicum CTTATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Ismelia carinata CTTATCTTCC----CATTCACTACTGTTTATA----CAATTATACAAA-----
 Endopappus macrocarpus CTTCTCTTCC----CATTCACTACTCTTTATA----CAA-----
 Leucanthemella serotina CTTATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Cota rigescens CTTATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Lugoa revolute CTTATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Hymenostemma serotina CTTATCTTCC----CATTCACTACTCTTTATA----CAA--ATACAAA-----
 Hippolytia dolichophylla CTTATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Gonospermum fruticosum CTTATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----
 Heliocaute atlantica CTTATCTTCC----CATTCACTACTCTTTATA----CAATTATACAAA-----

210 220 230 240 250 260 270 280 290 300
|.....|.....|.....|.....|.....|.....|.....|.....|.....|
 Tripleurospermum perforatum ---AGGA-----TCTGAGCGGAAAAGCTGTTTCTTATCACATCACA----CGGGATATATAT-ATATGATAGATGTACAAATGAACATCTTTGAGCA
 Pentzia flabelliformis ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Otanthus maritimus ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Anthemis cretica AAAAGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACAT--ACAAATGAACATCTTTGAGCA
 Tanacetum corymbosum ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAATATCTTTGAGCA
 Achillea ptarmica ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATGT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Matricaria discoidea ---AGGA-----TCTGAGCGGAAAAGATGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Artemisia vulgaris ---AGGA-----TCTGAGCAGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACCTCTTTGAGCA
 Brocchia cinerea ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CAGG---A-AT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Aaronsohnia pubescens ---AGGG-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATTACA----GGGG---ATAT-ATATGATACATGTACAAAT-----TTGAGCA
 Nivellea nivellei ---AGGG-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATTACA----GGGG---ATAT-ATATGATACATGTACAAAT-----TTGAGCA
 Otospermum glabrum ---AGGG-----AAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Cladanthus arabicus AAAA-----TCTGAGCGTAAAAGCGGTTCTCTTATCACATCACA----GGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Rhetinolepis lonadioides ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----GGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Meconischnus halimifolius ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----GGG---TAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Chamaemelum nobile ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATATATATGATACATGTACAAATGAAGATCTTTGAGCA
 Santolina rosmarinifolia ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Glebionis coronaria ---AGGA-----TCTGGGCGGAAAAGCTGTTCTCTTATC-CATTACA----CGGG-----ATACATGTACAAATGAACATCTTTGAGCA
 Heteranthemis viscidhirta ---AGGA-----TCTGGGCGGAAAAGCTGTTCTCTTATCACATTACA----CGGG-----ATACATGTACAAATGAACATCTTTGAGCA
 Argyranthemum adauctum ---AGGA-----TCTGGGCGGAAAAGCTGTTCTCTTATCACATTACA----CGGG-----ATACATGTACAAATGAACATCTTTGAGCA
 Lepdophorum repandum ---AG-----ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCG
 Lons annua ---AGGA-----TCCGCTCGTAAAAGCTGTTCTCTTATCACATCACA----CGGG-----ATACATGTACAAATGAACATCTTTGAGCA
 Glossopappus macrotus ---GGA-----CCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGCACATATTTGAGCA
 Mauranthemum gaetulum AAAAGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATATTTGAGCA
 Plagiis fontanesii AAAAGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Rhodanthemum hosmariense ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Chrysanthoglossum deserticola ---AGGATCCCGATCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATCT-ATATGATACATGTACAAATGAACATCTTTAGCA
 Chlamytophora tridentata ---AGGA-----TCTGAGCGGAAAAGCTCTTCTCTTATCACATCACA----GGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Leucanthemum vulgare ---AGGA-----TCTGCGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT--ATGATACATGTACAAATGAACATCTTTGAGCA
 Coleostephus myconis ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Heteromera fuscata ---AGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Leucanthemopsis alpine AAAAAGA-----TCTGAACGGAAAAGCTGTTCTCTTCTCACATCACATCACACGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Prolongoa hispanica AAAAGGA-----TCTGAACGGAAAAGCTGTTCTCTTCTCACATCACA----GGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Castrilanthemum debeauxii AAAAGGA-----TCTGAGCGGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Phalacrocarpum oppositifolium ---AGGA-----GTCTGAGCGGAAAAGCTGTTCTCTTCTCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Anacyclus radiatus ---AGGA-----TCCGAGCGGAAAAGCTGTTCTCTTAGCACA-----GGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA
 Chrysanthemum indicum ---AGGA-----TCTGAGCAGAAAAGCTGTTCTCTTATCACATCACA----CGGG---ATAT-ATATGATACATGTACAAATGAACATCTTTGAGCA

Achillea ptarmica -GATGTGCATTTACTTGTGTTCTTTTTGGACCTCGTGAATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Matricaria discoidea -AATGTGCATTTGCTTGTGTTCTTT--TGGACCTGGTGAATGTTTCATTGGCGCAC TAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus linearilobus -GATGCCCATTTACTTGTGTTCTTT--TGGACTCGGTGAATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus valentinus -GATGCCCATTTACTTGTGTTCTTT--TGGACTCGGTGGATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus monanthos -GATGCGCATTTACTTGTGTTCTAC--GGAGCTCGGTGGATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus clavatus -GATGCGCATTTACTTGTGTTCTAC--GGAGCTCGGTGGATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus radiatus coronatus -GATGCGCATTTACTTGTGTTCTTT--TGGACTCGGTGAATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus radiatus radiatus -GATGCGCATTTACTTTTGTTCCTTT--TGGACTCGGTGAATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus homogamos -GATTCGCATTTACTTTTGTTCCTTT--TTGACTTGGTAAAGTGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus maroccanus -GATTCGCATTTACTTTTGTTCCTTT--TTGACTTGGTAAAGTGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Anacyclus pyrethrum -GATGCGCATTTACTTTTGTTCCTTT--TGGACTTGGTAAATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA
Heliocauta atlantica -GATGCGCATTTACTTGTGTTCTTT--TGGACCTTGTGAATGTGTTCATTGACGCAATAACAACCCCGGCACAATGTGTGCCAAGGAAAAC TAAACTTGA

210 220 230 240 250 260 270 280 290 300

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Anthemis cretica GAAGGCTTGTGTTTATGTTGCCCGTTTCGCGGTGTGCTCATGAGACGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATCTTTGTTGGGGGCGGATAT
Anthemis odontostephana GAAGGCTTATTTTTTGTGTTGCCCGTTTCGCGGTGTGCTCATGAGACGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAA-CTTTGTTGTTGGGGCGGATAT
Anthemis chia GAAGGCTTGTGTTTATGATGCCCGTTTCGCGGTGAGCTCATGAGACGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACATATCTTTGTTGGGGGCGGATAT
Tripleurospermum perforatum GAAGGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGAACGTGGCTTCTTTTATAAATCGCATCGCCCTCCAACAAATATTTGTTGGGGACGGATAT
Cota rigescens GAAGGCTTGTCTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATCTTTGTTGGGGGCGGATAT
Gonospermum fruticosum GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGACGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATCTTTGTTGGGGGCGGATAT
Lugoa revolute GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGACGTGGCTTCTTTTATAAATCGCGTCGCCCTCAACAAATCTTTGTTGGGGGCGGATAT
Tanacetum corymbosum GAAGGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGACGTGGCTTCTTTTATAAATCGCGTCCTCCCAATAAATCTTTGTTGGGGGCGGATAT
Otanthus maritimus GAAGGCTAGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGAATGTGGCTTCTTTTATAAATCGCGTCGCCCTCAACAAATCCATGTTGGGGGCGGATAT
Achillea ptarmica GAAGGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGAATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATCTCTGTTGGGGGCGGATAT
Matricaria discoidea GAAGGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCTCAACAAA-CTATGTTGGGGGCGGATAT
Anacyclus linearilobus GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATCTTTGTTGGGAGCGGATAT
Anacyclus valentinus GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATGTTGTTGGGAGCGGATAT
Anacyclus monanthos GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATCTTTGTTGGGAGCGGATAT
Anacyclus clavatus GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATCTTTGTTGGGAGCGGATAT
Anacyclus radiatus coronatus GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCTCGCACCCCAACAAATCTTTGTTGGGAGCGGATAT
Anacyclus radiatus radiatus GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATATGGCTTCTTTTATAAATCGCGTCGCACCCCAACAAATCTTTGTTGGGAGCGGATAT
Anacyclus homogamos GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCGTGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATATTTGTTGGGAG-GGATAT
Anacyclus maroccanus GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCGTGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATATTTGTTGGGAGCGGATAT
Anacyclus pyrethrum GAATGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCCCCCAACAAATATTTGTTGGGAGCGGATAT
Heliocauta atlantica GAAGGCTTGTGTTTATGATGCCCGTTTCGCGGTGTGCTCATGGGATGTGGCTTCTTTTATAAATCGCGTCGCMCCCAACAAATCTTTGTTGGGAGCGGATAT

310 320 330 340 350 360 370 380 390 400

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Anthemis cretica TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Anthemis odontostephana TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Anthemis chia TGG-TGGCCCGTGGCCATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGATGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Tripleurospermum perforatum TGG-TTTCCCGTGTCTATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGATGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Cota rigescens TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Gonospermum fruticosum TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Lugoa revolute TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Tanacetum corymbosum TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Otanthus maritimus TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTAGCTCTGT
Achillea ptarmica TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTCTGT
Matricaria discoidea TGG-TCTCCCGTGTCTATGGTGTGGTTGGCCAAAATAAGAGTCCCTTCGATGGACGCACGAAGTGGTGGTTCGTA AAAACCCCTCGTTCTTTGTTTGT

Anacyclus linearilobus TGG-TCTCCCGTGCTCATGTGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGT
Anacyclus valentinus TGG-TCTCCCGTGCTCATGGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC
Anacyclus monanthos TGG-TCTCCCGTGCTCATGGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC
Anacyclus clavatus TGG-TCTCCCGTGCTCATGGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGT
Anacyclus radiatus coronatus TGG-TCTCCCGTGCTTATTGCGTGGTTGGCCAAAATAGGAGTCC-TTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC
Anacyclus radiatus radiatus TGG-TCTCCCGTGCTTATTGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC
Anacyclus homogamos TGG-TCTCCCGTGCTCATGGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC
Anacyclus maroccanus TGG-TCTCCCGTGCTCATGGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC
Anacyclus pyrethrum TGG-TCTCCCGTGCTCATGGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCACGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC
Heliocauta atlantica TGG-TCTCCCGTGCTCATGGCGTGGTTGGCCAAAATAGGAGTCCCTTCGATGGACGCATGAACTAGTGGTGGTCGTAAAAACCCCTCGTTCTTTGTTCTGC

410 420 430 440 450 460 470

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Anthemis cretica GCCTA---GTCGCAAGGAAAAGCTCTTTCAATACCCCAATGTGTTGTCTTA-TGACGACGCTTCGACC01011110
Anthemis odontostephana GTTA---GTCGAAAGGAAAAACTCTTTGAATACCCCAATGTGTTGTCTTC-GGATGATGCTTCGACC01011100
Anthemis chia GTTA---GTCGTAAGGAAAAACTCTTTAAATACCCCAATGCGTTGTCTTT-TGATGACGTTTCGACC01011100
Tripleurospermum perforatum GTTA---GTCGTAAGGAAAAACTCTCTAAATACCC-AATGTGTTGTCTTT-GGATGATGCTTCGACC11010110
Cota rigescens GTTA---GTCGCAAGGAAAAACTCTTCAAATACCCCAATGTGTTGTCTTC-GGATGACGCTTCGACC11011100
Gonospermum fruticosum GT-A---GTCGCAAGGAAAAACCCCTTCAAATACCCCAATGTGTTGTCTTAAGGATGACGCTTCGACC11011100
Lugoa revolute GTTA---GTCGCAAGGAAAAACCCCTTAAATACCCCAATGTGTTGTCTTA-GGATGACGCTTCGACC11011100
Tanacetum corymbosum GTTA---GTCGTAAGGAAAAACTCTTCAAATACCCCAATGTGTTGTCAAC-GGATGACGCTTCGACC11011100
Otanthus maritimus GTTA---GTCGTAAGGAAAAACTCTTCAAATACCCCTATGTGTTGTCTTA-AGATGATGCTTCGACC01011101
Achillea ptarmica GTTG---GTCGTAAGGAAAAGACTCTTCAAATACCCCAATGTGTTGTCTTA-GGATGACGCTTCGACC11011101
Matricaria discoidea GTTGTCGGTCGTAAGGATCAGCTCTCTAAATACCC-AATGTGTTGTCTTA-GGATGACGCTTCGACC11011100
Anacyclus linearilobus GTTA---GTCGTAAGGAAAAACTCTTCAAACACCCCAATGTGTTGTCTTA-GGACGATGCTTCGACC10N1NN00
Anacyclus valentinus GTTA---GTCGTAAGGAAAAACTCTTCAAACACCCCAATGTGTTGTCTTA-GGACGACGAAATCGACC00NNN100
Anacyclus monanthos GTTA---GTTGTAAGGAAA-ACTCTTCGAATACCCCAATGTGTTGTCTTA-GGATGACGCTTCGACC11011000
Anacyclus clavatus GTTA---GTCGTAAGGAAAAACTCTTCAAACACCCCAATGTGTTGTCTTA-GGACGACGCTTCGACC11011000
Anacyclus radiatus coronatus GTTA---GTCGTAAGGAAAAATAXTCTT-AAATACCCCAATGTGTTGTCTTA-GGATGATGCTTCGACC11011100
Anacyclus radiatus radiatus GTTA---GTCGTAAGGAAAAACTCTTCAAACACCCCAATGTGTTGTCTTA-GGATGACGCTTCGACC11011100
Anacyclus homogamos GTTA---GTTGTAAGGAAAAGCTCTTCAAATACCCCAATGTGTTGTCTTA-GGACGATGCTTCGACC1110N100
Anacyclus maroccanus GTTA---GTTGTAAGGAAAAGCTCTTCAAATACCCCAATGTGTTGTCTTA-GGACGATG-TTCGACC1110N100
Anacyclus pyrethrum GTTA---GTCGTAAGGAAAAGCTCTTCAAATACCCCAATGTGTTGTCTTA-GGATGATGCTTCGACC01010100
Heliocauta atlantica GTTA---GTCGTAAGGAAAAACTCTTCAAATACCCCAACGTGTTGTCTTA-GGATGACGCTTCGACC11011100