**Appendix 1.** Voucher information and Short Read Archive accession numbers for data generated for this study. In some cases, two molecular samples are vouchered by the same herbarium specimen because multiple individuals of the same population were sequenced.

***Crassocephalum crepidioides* (Benth.) S.Moore**, CANB 811222, SAMN30608566; ***Delairea odorata* Lem.**, CANB 907457, SAMN30608567; ***Emilia fosbergii* Nicolson**, CANB 584802, SAMN30608568; ***Emilia sonchifolia* (L.) DC.**, CANB 572841, SAMN30608569; ***Erechtites valerianifolius* (Link ex Spreng.) DC.**, CANB 712191, SAMN30608570; ***Euryops abrotanifolius* (L.) DC.**, CANB 682242, SAMN30608571; ***Euryops chrysanthemoides* (DC.) B.Nord.**, CANB 870883, SAMN30608572; ***Jacobaea vulgaris* Gaertn.**, CANB 600809, SAMN30608573; ***Lordhowea insularis* (Benth.) B.Nord.**, CBG 8201090, SAMN30608574; ***Senecio adnatus* DC.**, D. Egli 170 (NU), SAMN30608575; NU 68021, SAMN30608576; NU 68033, SAMN30608577; NU , SAMN30608578; ***Senecio affinis* DC.**, CANB 683912, SAMN30608579; *D. Egli 188* (NU), SAMN30608580; NU 68096, SAMN30608581; ***Senecio angulatus* L.f.**, CANB 511346, SAMN30608582; ***Senecio angustifolius* (Thunb.) Willd.**, CANB 634611, SAMN30608583; ***Senecio bupleuroides* DC.**, CANB 389284, SAMN30608584; NU 80041, SAMN30608585; ***Senecio conrathii* N.E.Br.**, *D. Egli 171* (NU), SAMN30608586; NU 68012, SAMN30608587; ***Senecio coronatus* Harv.**, NU 68034, SAMN30608588; ***Senecio elegans* L.**, CANB 487468, SAMN30608589; ***Senecio glaberrimus* DC.**, NU 68018, SAMN30608590; ***Senecio glastifolius* L.f.**, CANB 724957, SAMN30608591; ***Senecio harveianus* MacOwan**, NU 68008, SAMN30608592; ***Senecio hygrophilus* Klatt**, NU 68062, SAMN30608593; ***Senecio inaequidens* DC.**, *E.J. Weeda s.n.* (CANB 694804), SAMN30608594; *N. Kilian 6521* (CANB), SAMN30608595; *S.J. Ooststroom 24994* (CBG), SAMN30608596; *V. Lesieur s.n.* (CSIRO European Laboratory), SAMN30608597; *A.N. Schmidt-Lebuhn s.n.* (CANB), SAMN30608598; ***Senecio inornatus* DC.**, NU 68117, SAMN30608599; ***Senecio leptophyllus* DC.**, CANB 409987, SAMN30608600; ***Senecio madagascariensis*** **Poir.**, *L. Pedley 4196* (CANB), SAMN30608603; *M. Gray 7050* (CANB), SAMN30608606; *P.C. Heyligers 99011* (CANB), SAMN30608607; *L. Pedley 5786* (CANB), SAMN30608604; *L. Pedley 6000* (CANB), SAMN30608605; *I. Crawford 7743* (CANB), SAMN30608601; *I. Crawford 8445* (CANB), SAMN30608602; *R.W. Purdie 10180* (CANB), SAMN30608608; *A.N. Schmidt-Lebuhn 1935* (CANB), SAMN30608609; *C. Burgess s.n.* (CBG 30989), SAMN30608610; *J. Dymock s.n.* (CANB 953780), SAMN30608611; *J. Dymock s.n.* (CANB 953783), SAMN30608612; *J. Dymock s.n.* (CANB 953783), SAMN30608613; *J. Dymock s.n.* (CANB 953779), SAMN30608614; *J. Dymock s.n.* (CANB 953778), SAMN30608615; *J. Dymock s.n.* (CANB 953777), SAMN30608616; *J. Dymock s.n.* (CANB 953778), SAMN30608617; *J. Dymock s.n.* (CANB 953779), SAMN30608618; *J. Dymock s.n.* (CANB 953780), SAMN30608619; *D. Egli 202* (NU), SAMN30608620; *D. Egli 202* (NU), SAMN30608621; *D. Egli 203* (NU), SAMN30608622; D. Egli 203 (NU), SAMN30608623; D. Egli 204 (NU), SAMN30608624; *D. Egli 205* (NU), SAMN30608625; *D. Egli 205* (NU), SAMN30608626; *D. Egli 206* (NU), SAMN30608627; *D. Egli 206* (NU), SAMN30608628; *D. Egli 207* (NU), SAMN30608629; *D. Egli 207* (NU), SAMN30608630; *D. Egli 208* (NU), SAMN30608631; *D. Egli 208* (NU), SAMN30608632; *D. Egli 209* (NU), SAMN30608633; *D. Egli 209* (NU), SAMN30608634; *D. Egli 210* (NU), SAMN30608635; *D. Egli 210* (NU), SAMN30608636; *D. Egli 211* (NU), SAMN30608637; *D. Egli 211* (NU), SAMN30608638; *D. Egli 212* (NU), SAMN30608639; *D. Egli 212* (NU), SAMN30608640; *D. Egli 213* (NU), SAMN30608641; *D. Egli 213* (NU), SAMN30608642; *D. Egli 214* (NU), SAMN30608643; *D. Egli 214* (NU), SAMN30608644; *D. Egli 214* (NU), SAMN30608645; *D. Egli 215* (NU), SAMN30608646; *D. Egli 215* (NU), SAMN30608647; *D. Egli 215* (NU), SAMN30608648; ***Senecio panduriformis*** **Hilliard**, D. Egli 198 (NU), SAMN30608649; ***Senecio pinnatifolius* var. *alpinus* (Ali) I.Thomps.**, Gooden s.n. (CANB 952370), SAMN30608651; ***Senecio pinnatifolius* var. *pinnatifolius* A.Rich.**, Gooden s.n. (CANB 908005), SAMN30608650; ***Senecio polyodon* DC.**, NU 68073, SAMN30608652; ***Senecio pterophorus*** **DC.**, CANB 351113, SAMN30608653; ***Senecio retrorsus*** **DC.**, NU 68092, SAMN30608654; NU 68109, SAMN30608655; ***Senecio scitus*** **Hutch. & Burtt Davy**, CANB 634505, SAMN30608656; NU 68031, SAMN30608657; ***Senecio serratuloides* DC.**, *D. Egli 192* (NU), SAMN30608658; *D. Egli 194* (NU), SAMN30608659; ***Senecio skirrhodon*** **DC.**, *J. Dymock s.n.* (CANB 953777), SAMN30608660; *J. Dymock s.n.* (CANB 953781), SAMN30608661; *D. Egli 216* (NU), SAMN30608662; *D. Egli 216* (NU), SAMN30608663; *D. Egli 217* (NU), SAMN30608664; *D. Egli 217* (NU), SAMN30608665; *D. Egli 218* (NU), SAMN30608666; *D. Egli 218* (NU), SAMN30608667; *D. Egli 219* (NU), SAMN30608668; *D. Egli 219* (NU), SAMN30608669; *D. Egli 220* (NU), SAMN30608670; *D. Egli 220* (NU), SAMN30608671; ***Senecio tamoides*** **DC.**, CBG 9406157, SAMN30608672; ***Senecio vulgaris* L.**, CANB 908922, SAMN30608673.