

# Additional records for *Stenosagola newtoni* Park & Carlton, 2013 (Staphylinidae: Pselaphinae: Faronitae), with notes on aedeagal morphology

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Academic editor: Stylianos Chatzimanolis

## Abstract

The purpose of this short note is to identify morphospecies sp. 0471 of the Hope River Forest Fragmentation Project. It is *Stenosagola newtoni* Park & Carlton, 2013. The material listed herein raises the number of published specimen records for *S. newtoni* from 2 to 51. All additional 49 specimens are fully winged males, collected in flight intercept traps (FITs), from the South Island of New Zealand. Examination of the new material has resulted in the detection of an error in the original description of *S. newtoni*, whereby the mirror image of the aedeagus was inadvertently illustrated. It is not a case of genitalic antisymmetry.

## Keywords

Hope River Forest Fragmentation Project, New Zealand, *Stenosagola newtoni*

## Introduction

Taxonomic revision of the genus *Stenosagola* Broun, 1921 (Park and Carlton 2013) has facilitated the identification of morphospecies sp. 0471 from the Hope River Forest Fragmentation Project (HRFFP). For an overview of HRFFP, see Ewers et al. (2002). It is a study on the effects of forest fragmentation on native biodiversity in New Zealand. Morphospecies sp. 0471 is herein determined to be *Stenosagola newtoni* Park & Carlton, 2013, hitherto known only from the holotype and a single paratype (both males). 49 additional specimens are herein recorded, all from HRFFP. 42 specimens of sp. 0471 were used in the analysis by Ewers et al. (2007), but one specimen (#0934-008) is herein determined to belong to the Euplectitae. 8 additional specimens from the HRFFP samples, but not used in the analysis, are herein recorded. Morphospecies sp. 0471 was referred to as Euplectini [Euplectitae] sp. 27 in the analysis, but this placement is incorrect (except for specimen #0934-008), as is immediately evident from the paired tarsal claws.

## Materials and methods

24 out of the 49 fully winged HRFFP specimens (~50%) were dissected (or had the aedeagus clearly visible without dissection), including at least one from each site (Bush Hut, Donut, Front Dismal, High Ridge, Home Range, Kakapo, Meat Safe, Prairie, St. James, Twin, Umbrella, Windy Point). The remaining specimens are assumed to be males because fully winged females are unknown in *Stenosagola* (Park and Carlton 2013), and are identified as *S. newtoni* by association with the dissected material. Photographs of each specimen and its label(s) have been uploaded to the website NatureWatch NZ. The species was identified by comparison of the aedeagus to figures thereof for the genus *Stenosagola* in Park and Carlton (2013). The aedeagi of the HRFFP material was a perfect match for fig. 12d therein, except for being the mirror image! Note that the aedeagus in dorsal view can be recognised by the presence of a small basal lobe, which is absent in ventral view, and by having concave longitudinal curvature. See below for more discussion on this issue. All specimens will be deposited in the Entomology Research Museum, Lincoln University (LUNZ), New Zealand.

## Taxon treatment

### *Stenosagola newtoni* Park & Carlton, 2013

#### Materials

- a. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Bush Hut (44.29ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 23E; verbatimCoordinateSystem: degrees minutes; eventID: #284; samplingProtocol: FIT; samplingEffort: 16 days; eventDate: 2000-12-18; habitat: forest 128m canopy; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #284-007; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: E148FCED-161E-5A6D-9B67-BE484EAB2DD9
- b. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Donut (0.69ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 22E; verbatimCoordinateSystem: degrees minutes; eventID: #0350; samplingProtocol: FIT; samplingEffort: 12 days; eventDate: 2000-12-18; habitat: forest 2m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0350-066; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName:

- Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 631B3E14-34D3-5676-947D-A605A7EFC062
- c. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Donut (0.69ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 22E; verbatimCoordinateSystem: degrees minutes; eventID: #1049; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-01-15; habitat: forest 2m canopy; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1049[-001]; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 01585231-81F2-5A53-A8A9-5F377A1CB1F8
- d. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Front Dismal (71ha); verbatimLatitude: 42 37S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0268; samplingProtocol: FIT; samplingEffort: 16 days; eventDate: 2000-12-17; habitat: pasture 256m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0268-007; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: EC9E22D7-8395-5C23-9DEB-3B6E6E84DE44
- e. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Front Dismal (71ha); verbatimLatitude: 42 37S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0243; samplingProtocol: FIT; samplingEffort: 16 days; eventDate: 2000-12-17; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0243-010; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: A35C4677-18A3-553E-A4FD-0E9518A0588A
- f. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Front Dismal (71ha); verbatimLatitude: 42 37S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1646; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-11; habitat: forest 64m canopy; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1646[-001]; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project;

- basisOfRecord: PreservedSpecimen; occurrenceID: BD638A9F-03FE-509F-A414-2D1F08276AF1
- g. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Front Dismal (71ha); verbatimLatitude: 42 37S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1634; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-11; habitat: forest 8m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1634-014; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 44FECBDC-0604-52BF-91B1-CC5931E0425F
- h. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #378; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-19; habitat: forest 0m canopy; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #378[001]; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: FB7DB15B-DEDC-5667-B32B-2AA8ECA83A17
- i. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0383; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-19; habitat: pasture 4m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0383-019; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 53A7A0A2-E7EA-5609-99C5-1DA45942CD88
- j. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0375; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-19; habitat: forest 2m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0375-055; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName:

- Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: F7861D50-B938-5594-8E0C-509815F435AC
- k. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0375; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-19; habitat: forest 2m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0375-064; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 003DA504-3D81-50DC-BE2C-1FCEF1A29F84
- l. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0374; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-19; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0374-003; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: CCD23CEF-D8AE-553B-9050-7C241D63C5E3
- m. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0382; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-19; habitat: pasture 2m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0382-034; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: D070BF20-D4F3-53B5-9409-6EAA5339298C
- n. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0375; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-19; habitat: forest 2m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0375-072; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project;

- basisOfRecord: PreservedSpecimen; occurrenceID: 3D0169DE-2900-5191-B2D8-4F3403C31186
- o. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #1771; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-13; habitat: pasture 4m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1771-013; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: F2A8A256-60F4-51D1-A74E-B0099F96939B
- p. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: High Ridge (0.06ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #1771; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-13; habitat: pasture 4m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1771-016; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 4DDFFF16-2181-50D2-9F18-D9E962B84901
- q. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Home Range (0ha); verbatimLatitude: 42 37S; verbatimLongitude: 172 27E; verbatimCoordinateSystem: degrees minutes; eventID: #0422; samplingProtocol: FIT; samplingEffort: 9 days; eventDate: 2000-12-16; habitat: forest 1024m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0422-019; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 5C4E525F-55EA-517F-9358-6A6F415A4178
- r. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0204; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-20; habitat: pasture 2m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0204-007; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName:

- Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 04236F6C-C1AB-5ED6-A2E8-253D175D5DC4
- s. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0190; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-20; habitat: forest 256m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0190-031; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 40DBC844-CF60-59B6-BE2E-3E061AE0E5A5
- t. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0182; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-20; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0182-010; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 4D5AB497-155A-5287-8708-247EDC0EC974
- u. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0187; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-20; habitat: forest 32m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0187-001; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 9DE15AC5-BF80-53B0-873C-A35065C7A93E
- v. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0876; samplingProtocol: FIT; samplingEffort: 13 days; eventDate: 2001-01-16; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0876-010; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 01110040-FB13-5F1D-890D-05CD201B4C

- w. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1579; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-14; habitat: forest 512m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1579-005; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: C723B3F2-248B-5BD5-AD9D-52556B5287EE
- x. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1570; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-14; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1570-014; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: F1536D0A-5663-52CF-97C7-8E2BEE1A6FFC
- y. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1578; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-14; habitat: forest 256m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1578-044; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 9192D235-F6E1-5DBE-9CC6-C0B054DAD5E8
- z. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Kakapo (1060ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1577; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-14; habitat: forest 128m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1577-002; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project;



- basisOfRecord: PreservedSpecimen; occurrenceID: E356A1ED-C237-5DEF-9B2E-8229B2DB31E3
- aa. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0238; samplingProtocol: FIT; samplingEffort: 17 days; eventDate: 2000-12-15; habitat: pasture 32m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0238-009; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: EBDA31CA-207F-51EF-9113-88C282CD2A53
- ab. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0214; samplingProtocol: FIT; samplingEffort: 17 days; eventDate: 2000-12-15; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0214-158; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Possibly damaged or aberrant, but still closest to *S. newtoni*; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 3DF3ACFC-8F92-514A-AC0F-95C8828702DD
- ac. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0214; samplingProtocol: FIT; samplingEffort: 17 days; eventDate: 2000-12-15; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0214-108; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 8CC3000B-0DA1-50FB-B5B9-561DC6848D72
- ad. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0583; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2000-12-29; habitat: pasture 8m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0583-001; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;

- identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: E9AF5478-8AD6-548C-A123-2ACE86E25076
- ae. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0931; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-01-12; habitat: pasture 16m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0931-001; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: CF6E3DC2-802E-55ED-9867-785A4B89F4A1
- af. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0908; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-01-12; habitat: forest 0m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0908-067; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 8C00C57A-6178-53D2-8F1D-9EA77D8BC6C2
- ag. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0929; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-01-12; habitat: pasture 4m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0929-013; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 5338DF13-3978-569A-BEE3-71D7A0D085F3
- ah. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #1610; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-09; habitat: forest 256m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1610-019; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;

- identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 2782DBEE-22A1-5FA5-8E31-55605163326C
- ai. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #1622; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-09; habitat: pasture 2m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1622-010; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 17DE0974-A86B-5783-B83E-0DF61B6E56A7
- aj. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #1625; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-09; habitat: pasture 16m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1625-001; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 7C1E60CF-3777-5D2A-A789-0CB8493F7E8A
- ak. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #1628; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-09; habitat: pasture 128m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1628-001; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 5FA7A877-C530-5495-931F-C0CAC0981D39
- al. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Meat Safe (372.74ha); verbatimLatitude: 42 32S; verbatimLongitude: 172 24E; verbatimCoordinateSystem: degrees minutes; eventID: #1629; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-13; habitat: pasture 256m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1629-001; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;

- identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: BC6AA3EF-BF17-57E3-8F8E-CC3042EB1C05
- am. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Prairie (2.88ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0330; samplingProtocol: FIT; samplingEffort: 15 days; eventDate: 2000-12-18; habitat: pasture 32m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0330-001; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: 528612BC-DF46-5C7E-9F77-DFA175E69948
- an. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Prairie (2.88ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #0318; samplingProtocol: FIT; samplingEffort: 15 days; eventDate: 2000-12-18; habitat: forest 64m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0318-102; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: A9A9F73B-E3BF-5910-A58A-034F3EDE2356
- ao. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Prairie (2.88ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1021; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-01-15; habitat: pasture 4m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1021-011; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin*, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335; identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen; occurrenceID: A930ED49-E03F-5466-85F9-51F64FAFCB11
- ap. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand; verbatimLocality: Prairie (2.88ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 21E; verbatimCoordinateSystem: degrees minutes; eventID: #1703; samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-12; habitat: forest 8m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1703-005; recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014; identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).

- Coleopterists bulletin, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;  
 identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName:  
 Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen;  
 occurrenceID: 79909EBF-E6C2-5173-B5E8-A6E24367BCC4
- aq. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand;  
 verbatimLocality: St. James (1060407ha); verbatimLatitude: 42 30S; verbatimLongitude:  
 172 28E; verbatimCoordinateSystem: degrees minutes; eventID: #482; samplingProtocol:  
 FIT; samplingEffort: 14 days; eventDate: 2001-01-02; habitat: forest 64m canopy;  
 individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #482[-001]; recordedBy:  
 Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014;  
 identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand  
 genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).  
 Coleopterists bulletin, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;  
 identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton  
 (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project;  
 basisOfRecord: PreservedSpecimen; occurrenceID: 93684AE2-4DD8-5C16-96C5-  
 F68554677A49
- ar. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand;  
 verbatimLocality: St. James (1060407ha); verbatimLatitude: 42 30S; verbatimLongitude:  
 172 28E; verbatimCoordinateSystem: degrees minutes; eventID: #1530;  
 samplingProtocol: FIT; samplingEffort: 14 days; eventDate: 2001-02-13; habitat: pasture  
 8m ground; individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #1530-001;  
 recordedBy: Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014;  
 identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand  
 genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).  
 Coleopterists bulletin, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;  
 identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName:  
 Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen;  
 occurrenceID: 61648ECC-4B9C-5C38-A902-8E44363DE99C
- as. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand;  
 verbatimLocality: Twin (0.92ha); verbatimLatitude: 42 39S; verbatimLongitude: 172 22E;  
 verbatimCoordinateSystem: degrees minutes; eventID: #339; samplingProtocol: FIT;  
 samplingEffort: 14 days; eventDate: 2000-12-18; habitat: forest 2m canopy;  
 individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #339[-001]; recordedBy:  
 Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014;  
 identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand  
 genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).  
 Coleopterists bulletin, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;  
 identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton  
 (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project;  
 basisOfRecord: PreservedSpecimen; occurrenceID: E76737B0-  
 C380-5F09-9302-164A920AC677
- at. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand;  
 verbatimLocality: Umbrella (0.02ha); verbatimLatitude: 42 38S; verbatimLongitude: 172  
 24E; verbatimCoordinateSystem: degrees minutes; eventID: #0397; samplingProtocol:  
 FIT; samplingEffort: 12 days; eventDate: 2000-12-18; habitat: forest 2m ground;  
 individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0397-024; recordedBy:  
 Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014;  
 identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand  
 genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).

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 identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton  
 (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project;  
 basisOfRecord: PreservedSpecimen; occurrenceID: 02F6375E-031A-5CE4-BD02-  
 DC48966FAAE0
- au. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand;  
 verbatimLocality: Windy Point (0.04ha); verbatimLatitude: 42 39S; verbatimLongitude:  
 172 23E; verbatimCoordinateSystem: degrees minutes; eventID: #392; samplingProtocol:  
 FIT; samplingEffort: 16 days; eventDate: 2000-12-18; habitat: forest 8m canopy;  
 individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0392[-001]; recordedBy:  
 Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014;  
 identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand  
 genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).  
 Coleopterists bulletin, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;  
 identificationRemarks: Aedeagus examined. Mirror image of fig. 12d in Park & Carlton  
 (2013); institutionCode: LUNZ; datasetName: Hope River Forest Fragmentation Project;  
 basisOfRecord: PreservedSpecimen; occurrenceID:  
 50E6B7F5-0E7D-5113-9E53-390A8DDF8314
- av. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand;  
 verbatimLocality: Windy Point (0.04ha); verbatimLatitude: 42 39S; verbatimLongitude:  
 172 23E; verbatimCoordinateSystem: degrees minutes; eventID: #389; samplingProtocol:  
 FIT; samplingEffort: 16 days; eventDate: 2000-12-18; habitat: forest 0m canopy;  
 individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #389-003; recordedBy:  
 Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014;  
 identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand  
 genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).  
 Coleopterists bulletin, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;  
 identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName:  
 Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen;  
 occurrenceID: 18E51FF8-418D-534A-B54E-BCCD835D1282
- aw. scientificName: *Stenosagola newtoni* Park & Carlton, 2013; country: New Zealand;  
 verbatimLocality: Windy Point (0.04ha); verbatimLatitude: 42 39S; verbatimLongitude:  
 172 23E; verbatimCoordinateSystem: degrees minutes; eventID: #388; samplingProtocol:  
 FIT; samplingEffort: 16 days; eventDate: 2000-12-18; habitat: forest 8m ground;  
 individualCount: 1; sex: male; lifeStage: adult; catalogNumber: #0388-001; recordedBy:  
 Raphael K. Didham; identifiedBy: Stephen E. Thorpe; dateIdentified: 2014;  
 identificationReferences: Park, J.-S.; Carlton, C.E. 2013: A revision of the New Zealand  
 genus *Stenosagola* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae).  
 Coleopterists bulletin, 67(3): 335-359. doi: 10.1649/0010-065X-67.3.335;  
 identificationRemarks: Aedeagus not examined; institutionCode: LUNZ; datasetName:  
 Hope River Forest Fragmentation Project; basisOfRecord: PreservedSpecimen;  
 occurrenceID: 87A9B0D6-8F58-5D47-ADF2-38440EBFFFE9

## Diagnosis

*S. newtoni* can only be recognised by the aedeagus (Fig. 1, Fig. 2). The shape of the median lobe is diagnostic. It is broad and flattened, with a slender apical lobe. The apical lobe is usually curved to the left in dorsal view (Fig. 1). The apical lobe is closer to the right hand margin of the main body of the median lobe than it is to the left hand

margin. The left hand margin is more convex (in the apical half) than the right hand margin.

### Distribution

South Island of New Zealand.

## Discussion

Aedeagal antisymmetry is a phenomenon whereby there can be mirror image variation in male genitalia (Schilthuizen 2013). All the aedeagi examined for the present note are the mirror image of fig. 12d in Park and Carlton (2013). However, the type specimens of *S. newtoni* in fact have identical aedeagal symmetry to the HRFFP material, and the mirror image of the aedeagus was inadvertently illustrated in fig. 12d (J.-S. Park pers. comm., 2014).

The following 8 specimens are from the HRFFP samples, but were not used in the analysis by Ewers et al. (2007): #284-007, #339[-001], #378[-001], #389-003, #392[-001], #482[-001], #1049[-001], and #1646[-001]. They have all been newly identified herein as *S. newtoni*. Of the 42 specimens of morphospecies sp. 0471 which were used in the analysis, 41 are newly identified herein as *S. newtoni*, but one specimen (#0934-008) is herein determined to belong to the Euplectitae.

## References

- Ewers R, Thorpe S, Didham R (2007) Synergistic interactions between edge and area effects in a heavily fragmented landscape. *Ecology* 88 (1): 96-106. [https://doi.org/10.1890/0012-9658\(2007\)88\[96:sibeaa\]2.0.co;2](https://doi.org/10.1890/0012-9658(2007)88[96:sibeaa]2.0.co;2)
- Ewers RM, Didham RK, Ranson LH (2002) The Hope River forest fragmentation project. *Weta* 24: 25-34. URL: [http://www.ento.org.nz/nzentomologist/free\\_issues/Weta24\\_1\\_2001/Weta24%281%29\\_25\\_34.pdf](http://www.ento.org.nz/nzentomologist/free_issues/Weta24_1_2001/Weta24%281%29_25_34.pdf)
- Park J-S, Carlton CE (2013) A revision of the New Zealand genus *Stenosago/a* Broun, 1921 (Coleoptera: Staphylinidae: Pselaphinae: Faronitae). *Coleopterists bulletin* 67 (3): 335-359. <https://doi.org/10.1649/0010-065x-67.3.335>
- Schilthuizen M (2013) Something gone awry: unsolved mysteries in the evolution of asymmetric animal genitalia. *Animal Biology* 63 (1): 1-20. <https://doi.org/10.1163/15707563-00002398>

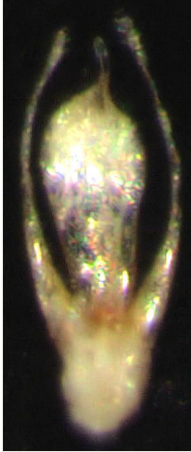


Figure 1.  
Aedeagus (dorsal view) of specimen #339[-001]



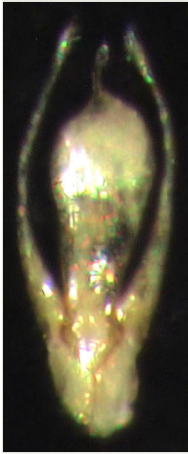


Figure 2.  
Aedeagus (ventral view) of specimen #339[-001]