

Puntarenas Province, Costa Rica

Gesneriaceae of the Golfo Dulce Region

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.



© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org]

[1529]

version 1 2/2023



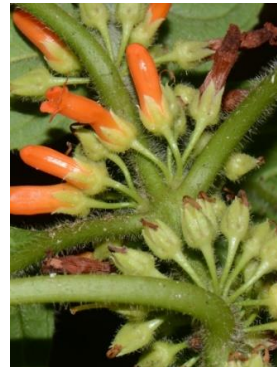
1 *Alloplectus weirii*
Barry Hammel



2 *Alloplectus weirii*
Barry Hammel



3 *Besleria hirsuta*



4 *Besleria hirsuta*



5 *Besleria hirsuta*



6 *Besleria hirsuta*



7 *Besleria laxiflora*



8 *Besleria laxiflora*



9 *Besleria laxiflora*



10 *Besleria laxiflora*



11 *Besleria pauciflora*



12 *Besleria pauciflora*
Barry Hammel



13 *Besleria pauciflora*



14 *Besleria tambensis*



15 *Besleria tambensis*



16 *Besleria tambensis*



17 *Besleria tambensis*



18 *Besleria tambensis*



19 *Besleria trichostegia*



20 *Besleria trichostegia*

Puntarenas Province, Costa Rica

Gesneriaceae of the Golfo Dulce Region

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.



© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org] [1529] version 1 2/2023



21 *Besleria trichostegia*



22 *Besleria trichostegia*



23 *Chrysothemis friedrichsthaliana*



24 *Chrysothemis friedrichsthaliana*



25 *Chrysothemis friedrichsthaliana*



26 *Chrysothemis pulchella*



27 *Chrysothemis pulchella*



28 *Chrysothemis pulchella*



29 *Codonanthispsis crassifolia*



30 *Codonanthispsis crassifolia*



31 *Codonanthispsis crassifolia*



32 *Codonanthispsis macradenia*



33 *Codonanthispsis macradenia*



34 *Codonanthispsis macradenia*



35 *Codonanthispsis uleana*
Ramón da Pena



36 *Codonanthispsis uleana*
Diego Bogarín



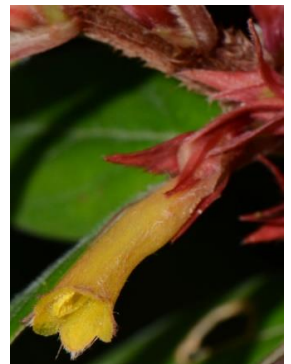
37 *Codonanthispsis uleana*
Ramón da Pena



38 *Columnea angustata*



39 *Columnea angustata*



40 *Columnea angustata*

Puntarenas Province, Costa Rica

Gesneriaceae of the Golfo Dulce Region

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.

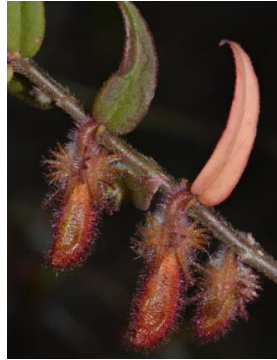


© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org] [1529] version 1 2/2023



41 *Columnea flaccida*
Agustín Herrera



42 *Columnea flaccida*



43 *Columnea flaccida*



44 *Columnea flaccida*
Agustín Herrera



45 *Columnea florida*



46 *Columnea florida*
Johan Ortiz



47 *Columnea florida*



48 *Columnea nicaraguensis*



49 *Columnea nicaraguensis*



50 *Columnea polyantha*



73 *Columnea polyantha*



74 *Eqwo pgc'r qrf cpj c*



75 *Eqwo pgc'r qrf cpj c*



76 *Eqwo pgc't c{ o qpf k"*



77 *Eqwo pgc't c{ o qpf k"*



56 *Columnea raymondii*



57 *Columnea sanguinolenta**
Barry Hammel



58 *Columnea segregata*



59 *Columnea segregata*



60 *Columnea segregata*

Puntarenas Province, Costa Rica

Gesneriaceae of the Golfo Dulce Region

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.



© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org]

[1529]

version 1

2/2023



61 *Columnnea segregata*
Marvin López



62 *Columnnea segregata*
Marvin López



63 *Diastema racemiferum*
Anthony H. Ramos



64 *Diastema racemiferum*
Anthony H. Ramos



65 *Drymonia alloplectoides*



66 *Drymonia alloplectoides*



67 *Drymonia alloplectoides*
Hillary Brumberg



68 *Drymonia macrantha*



69 *Drymonia macrantha*



70 *Drymonia macrantha*
José Araya-Orozco



71 *Drymonia macrophylla*



72 *Drymonia macrophylla*



73 *Drymonia macrophylla*



74 *Drymonia macrophylla*



75 *Drymonia serrulata*



76 *Drymonia serrulata*



77 *Drymonia serrulata*



78 *Drymonia stenophylla*



79 *Drymonia stenophylla*



80 *Drymonia stenophylla*

Puntarenas Province, Costa Rica

Gesneriaceae of the Golfo Dulce Region

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.



© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org] [1529] version 1 2/2023



81 *Drymonia turrialvae*



82 *Drymonia turrialvae*



83 *Drymonia turrialvae*



84 *Drymonia turrialvae*



85 *Drymonia uninerva*



86 *Drymonia uninerva*



87 *Drymonia uninerva*



88 *Episcia cupreata*
Cultivated/Exotic
Gared Rodríguez / ICFVS



89 *Episcia lilacina*



90 *Episcia lilacina*



95 *Gasteranthus delphinooides*
Richard C. Hover



92 *Gasteranthus delphinooides*



93 *Gasteranthus delphinooides*



94 *Gasteranthus delphinooides*
Richard C. Hover



95 *Gasteranthus delphinooides*



96 *Gasteranthus osaensis*



97 *Gasteranthus osaensis*



98 *Gasteranthus osaensis*
Marvin López



99 *Gloxinia perennis*
Cultivated/Exotic



100 *Gloxinia perennis*
Cultivated/Exotic
With Euglossa bee

Puntarenas Province, Costa Rica Gesneriaceae of the Golfo Dulce Region

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.



© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org] [1529] version 1 2/2023



101 *Kohleria allenii*



102 *Kohleria allenii*



103 *Kohleria allenii*



104 *Kohleria spicata*

Josué Pacheco



105 *Kohleria spicata*

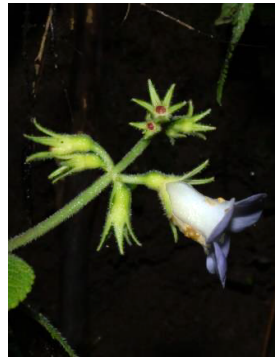


106 *Kohleria spicata*



107 *Monopyle puberula*

Anthony H. Ramos



108 *Monopyle puberula*

Anthony H. Ramos



109 *Napeanthus cf. bracteatus*



110 *Napeanthus cf. bracteatus*



105 *Napeanthus cf. bracteatus*



112 *Nautilocalyx biserrulatus*

Marvin López



113 *Nautilocalyx biserrulatus*



114 *Nautilocalyx biserrulatus*



115 *Nautilocalyx biserrulatus*



116 *Neomortonia rosea*
Barry Hammel



117 *Neomortonia rosea*
Barry Hammel



118 *Neomortonia rosea*
Oscar H. Marin



119 *Paradrymonia decurrens*



120 *Paradrymonia decurrens*

Puntarenas Province, Costa Rica

Gesneriaceae of the Golfo Dulce Region

7

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.



© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org]

[1529]

version 1

2/2023



121 *Paradrymonia decurrens*



122 *Paradrymonia decurrens*



123 *Paradrymonia decurrens*



124 *Trichodrymonia lineata*



125 *Trichodrymonia lineata*

Ruth Ripley



126 *Trichodrymonia lineata*



127 *Trichodrymonia pedunculata*
John L. Clark



128 *Trichodrymonia pedunculata*
John L. Clark



129 *Trichodrymonia pedunculata*
John L. Clark



130 *Trichodrymonia pedunculata*
John L. Clark

Acknowledgements

Thanks to Osa Conservation's botanical and restoration team for their support in field work and taking photos of some of these plants, especially to Hilary Brumberg, Mavin López, Johan Ortiz, Tara Jeffery, Jeremy Navarro and Josué Pacheco. To Franklín Foundation for funding part of the field work. To John L. Clark, Barry Hammel, Diego Bogarín, Ruth Ripley, José Araya-Orozco, Agustín Herrera C., Ramon da Pena, Richard hoye, Stefan Neuwirth, Anthony H. Ramos and Gared Rodríguez for kindly sharing their photographs. Further thanks to Charlotte M. Taylor (MO) for searching voucher specimens and obtaining images at MO which helped to confirm the presence of *Alloplectus weirii* and allowed us to study the presence of *Columnnea sanguinolenta* in the Golfo Dulce Region. Thanks are also due to the staff of the Field Station La Gamba for logistic help during fieldwork, and to Anton Weber for sharing his knowledge and passion for Gesneriaceae.

Notes

**Columnnea sanguinolenta* is placed in this guide as tentative; the reason is that *Columnnea segregata* is often misidentified as *Columnnea sanguinolenta*, particularly as herbarium specimens. We therefore checked the available voucher specimens from Golfo Dulce region at MO that were previously identified as *C. sanguinolenta* and, in our opinion, they correspond to *C. segregata*. Hence the presence of *C. sanguinolenta* in the Golfo Dulce region remains highly doubtful and needs further study.

Puntarenas Province, Costa Rica

Gesneriaceae of the Golfo Dulce Region

8

Leonardo Álvarez-Alcázar, Andreas Berger

Osa Conservation, Washington, DC, USA; Department of Botany and Biodiversity Research, University of Vienna, Vienna, Austria

Photos by the authors except where indicated. Produced by L. Álvarez-Alcázar [lalvarez.2596@gmail.com] and A. Berger [andi.berger@univie.ac.at] with the assistance of Maria Padilla, The Field Museum.



© Leonardo Álvarez-Alcázar; Andreas Berger (2022) CC BY-NC 4.0 Licensed works are free to use/share/remix with attribution, but commercial use of the original work is not permitted.

[fieldguides.fieldmuseum.org]

[1529]

version 1

2/2023

Table 1. Copyright information and original sources of the Photo credits.

Photo no.	Species	Copyright holder	License	Link to original photos
1	<i>Alloplectus weirii</i>	Barry Hammel	CC BY-NC-SA 2.0	https://www.flickr.com/photos/68114448@N06/33855627258/in/photolist-2ejZk9M-TzGWtm-TzGU4w-RXubBk/
2	<i>Alloplectus weirii</i>	Barry Hammel	CC BY-NC-SA 2.0	https://www.flickr.com/photos/68114448@N06/33855619148/in/photolist-2ejZk9M-TzGWtm-TzGU4w-RXubBk/
12	<i>Besleria pauciflora</i>	Barry Hammel	CC BY-NC-SA 2.0	https://www.flickr.com/photos/68114448@N06/40766019183/in/photolist-2fHYbYa-TzFRPy-TzFS9w-TzFSyj-257mveH-RXtbYe-TzFSYs/
35	<i>Codonanthesis uleana</i>	Ramón da Pena	CC BY-NC 4.0	https://www.inaturalist.org/observations/65452480
37	<i>Codonanthesis uleana</i>	Ramón da Pena	CC BY-NC 4.0	https://www.inaturalist.org/observations/65452480
57	<i>Columnea sanguinolenta</i>	Barry Hammel	CC BY-NC-SA 2.0	https://www.flickr.com/photos/68114448@N06/46812684175/in/photolist-2ejFfCP-2ejFf5p
91	<i>Gasteranthus dephinioides</i>	Richard C. Hover/ birdernaturalist	CC BY-NC-SA 4.0	https://www.inaturalist.org/observations/42365135
94	<i>Gasteranthus dephinioides</i>	Richard C. Hover/ birdernaturalist	CC BY-NC-SA 4.0	https://www.inaturalist.org/observations/42365135
116	<i>Neomortonia rosea</i>	Barry Hammel	CC BY-NC-SA 2.0	https://www.flickr.com/photos/68114448@N06/47736951451/in/photolist-RXR3Er-TA5aEu-2ewA7UE-2ekm8Lz-RXQXdP-257J7Jt-2fJmmx6/
117	<i>Neomortonia rosea</i>	Barry Hammel	CC BY-NC-SA 2.0	https://www.flickr.com/photos/68114448@N06/32793458357/in/photolist-RXR3Er-TA5aEu-2ewA7UE-2ekm8Lz-RXQXdP-257J7Jt-2fJmmx6/
118	<i>Neomortonia rosea</i>	Oscar H. Marin	CC BY-NC-SA	https://www.inaturalist.org/observations/18747333
125	<i>Trichodrymonia lineata</i>	Ruth Ripley	2.0 CC BY-NC 4.0	https://www.inaturalist.org/observations/34746207