

Núcleo Santa Virgínia, São Paulo, Brazil

Orchids of Serra do Mar State Park

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Carlos E.P. Nunes¹, Khalid Yasseen², Ryan Luxon², Harvey Williams², Samantha Koehler¹, Marcelo Pires²

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Introduction

The family Orchidaceae is one of the most diverse among flowering plants. There are about 24500 species of orchids spread across all continents except Antarctica, of which 1257 species, about 5%, occur in the Brazilian Atlantic forest (Dressler 2005; Stehman et al. 2009; Barros et al. 2014). These numbers place the orchid family as the largest of the monocotyledons and an important component of the flora of the Atlantic forest, comprising 8% of the vascular plant species of this biome (Stehman et al. 2009).

Sampling Sites and Method

Orchid species were sampled exclusively in the area of Núcleo Santa Virgínia area of Serra do Mar State Park (SMSP). The area managed by this unit comprises of 17,500 hectares of highland (from 800 to 1000 m.a.s.l.), majorly secondary (40–50 years old) Atlantic forest areas containing patches of primary forests with no records of cutting or logging (ombrophilous dense forest; Veloso et al. 1991). It is located between the municipalities of São Luiz do Paraitinga and Natividade da Serra, São Paulo state (23°26'08''S - 45°13'22.5''W and 23°19'55''S - 45°05'49''W, respectively), southeastern Brazil (Fig 1).

Sampling was carried out monthly between 2011 and 2015. In each monthly incursion, at least 12 km of trails were walked and flowering orchid species standing from the ground up to five meters in the canopy and five meters from the path were collected or photographed. Voucher specimens of the plants were deposited in the Herbarium of the State University of Campinas (UEC).

This Guide

We recorded representatives of three orchid subfamilies (Epidendroideae, Orchidoideae, and Vanilloideae) belonging to 57 genera totaling 124 species, from which 119 are depicted in this guide.

Acknowledgments

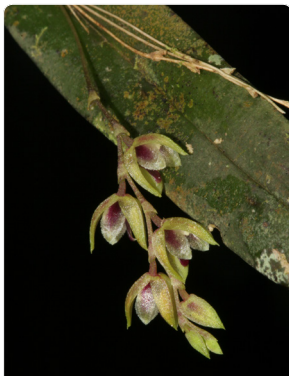
The authors would like to thank the orchid experts Bruno Morais de Carvalho, Edlley Max Pessoa da Silva, Eric Smidt, Giovane dos Santos Proença, and Wellington Forster for their kind help in the identification of some of the plants presented in this work. The authors also thank Edicson Parra for the record and the picture of *Cochleanthes flabelliformis*.



Fig. 1. Location of the sampling sites. More information about the Natural Reserve available at <http://www.parqueestadualserradomar.sp.gov.br/pesm/nucleos/santa-virginia/>

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01 *Acianthera auriculata*



02 *Acianthera glanduligera*



03 *Acianthera prolifera*



04 *Acianthera saundersiana*



05 *Acianthera saundersiana*

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06 *Acianthera saurocephala*



07 *Acianthera saurocephala*



08 *Acianthera saurocephala*



09 *Anathallis linearifolia*



10 *Anathallis linearifolia*



11 *Anathallis rubens*



12 *Anathallis rubens*



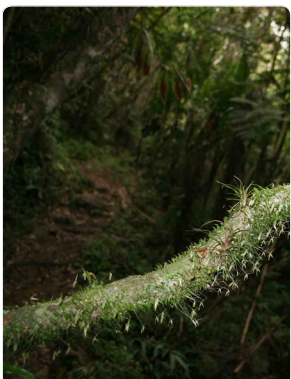
13 *Aspidogyne* aff. *metallescens*



14 *Aspidogyne argentea*



15 *Barbosella gardneri*



16 *Barbosella gardneri*



17 *Bifrenaria aureofulva*



18 *Bifrenaria harrisoniae*



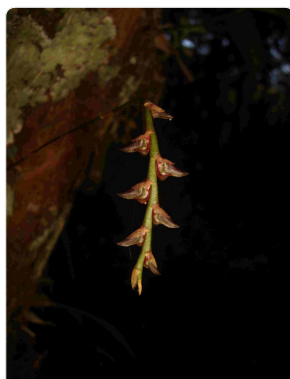
19 *Bifrenaria leucorrhoda*



20 *Brasiliorchis picta*



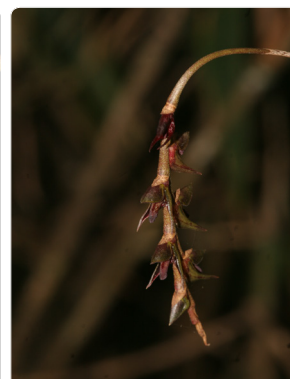
21 *Brasiliorchis picta*



22 *Bulbophyllum atropurpureum*



23 *Bulbophyllum atropurpureum*



24 *Bulbophyllum atropurpureum*



25 *Camaridium carinatum*

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26 *Campylocentrum gracile*



27 *Campylocentrum pauloense*



28 *Campylocentrum pauloense*



29 *Catasetum cernuum*



30 *Catasetum cernuum*



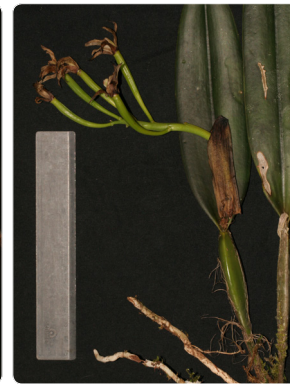
31 *Cattleya coccinea*



32 *Cattleya intermedia*



33 *Cattleya virens*



34 *Cattleya virens*



35 *Cattleya virens*



36 *Christensonella subulata*



37 *Christensonella subulata*



38 *Cleistes libonii*



39 *Cochleanthes flabelliformis*



40 *Cyclopogon congestus*



41 *Cyclopogon congestus*



42 *Dichaea australis*



43 *Dichaea australis*



44 *Dichaea cogniauxiana*



45 *Dichaea cogniauxiana*

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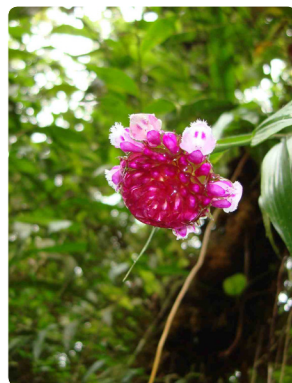
46 *Dichaea pendula*



47 *Dichaea pendula*



48 *Elleanthus brasiliensis*



49 *Elleanthus brasiliensis*



50 *Elleanthus brasiliensis*



51 *Elleanthus crinipes*



52 *Elleanthus crinipes*



53 *Elleanthus crinipes*



54 *Encyclia patens*



55 *Encyclia patens*



56 *Epidendrum addae*



57 *Epidendrum addae*



58 *Epidendrum armeniacum*



59 *Epidendrum chlorinum*



60 *Epidendrum chlorinum*



61 *Epidendrum ecostatum*



62 *Epidendrum latilabre*



63 *Epidendrum latilabre*



64 *Epidendrum ochroclorum*



65 *Epidendrum ochroclorum*

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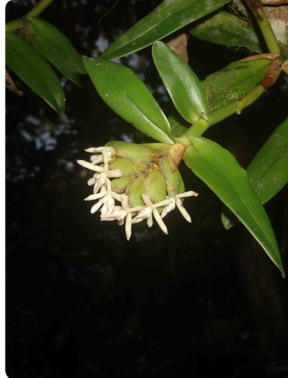
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66 *Epidendrum ochroclorum*



67 *Epidendrum paranaense*



68 *Epidendrum paranaense*



69 *Epidendrum proligerum*



70 *Epidendrum pseudodiforme*



71 *Epidendrum pseudodiforme*



72 *Epidendrum ramosum*



73 *Epidendrum ramosum*



74 *Epidendrum ramosum*



75 *Epidendrum secundum*



76 *Epidendrum secundum*



77 *Epidendrum vesicatum*



78 *Eulophia alta*



79 *Eurystyles actinosophila*



80 *Galeandra beyrichii*



81 *Galeandra beyrichii*



82 *Gomesa brasiliensis*



83 *Gomesa brasiliensis*



84 *Gomesa echinata*



85 *Gomesa echinata*

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86 *Gomesa ecbinata*



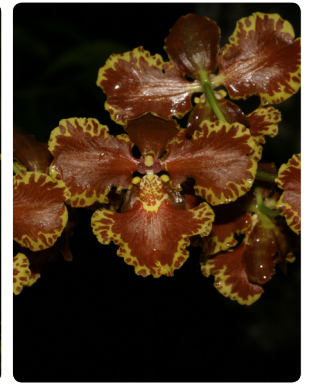
87 *Gomesa flexuosa*



88 *Gomesa flexuosa*



89 *Gomesa forbesii*



90 *Gomesa forbesii*



91 *Gomesa gardneri*



92 *Gomesa gardneri*



93 *Gomesa jucunda*



94 *Gomesa jucunda*



95 *Gomesa laxiflora*



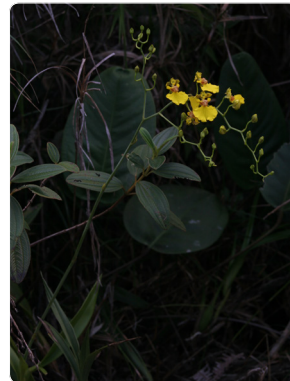
96 *Gomesa laxiflora*



97 *Gomesa laxiflora*



98 *Gomesa ramosa*



99 *Gomesa ramosa*



100 *Gomesa ramosa*



101 *Gomesa ranifera*



102 *Gomesa ranifera*



103 *Gomesa ranifera*



104 *Gomesa recurva*



105 *Gomesa recurva*

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106 *Gongora bufonia*



107 *Gongora bufonia*



108 *Gongora bufonia*



109 *Gongora bufonia*



110 *Govenia utriculata*



111 *Grandiphyllum divaricatum*



112 *Grandiphyllum divaricatum*



113 *Grobya amberstiae*



114 *Grobya amberstiae*



115 *Grobya amberstiae*



116 *Habenaria* aff. *josphensis*



117 *Habenaria glaucophylla*



118 *Habenaria glaucophylla*



119 *Habenaria johannensis*



120 *Habenaria johannensis*



121 *Habenaria johannensis*



122 *Habenaria parviflora*



123 *Habenaria rodeiensis*



124 *Heterotaxis brasiliensis*



125 *Heterotaxis brasiliensis*

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126 *Heterotaxis brasiliensis*



127 *Jacquiella globosa*



128 *Jacquiella globosa*



129 *Laeliinae* sp. 1



130 *Lankesterella caespitosa*



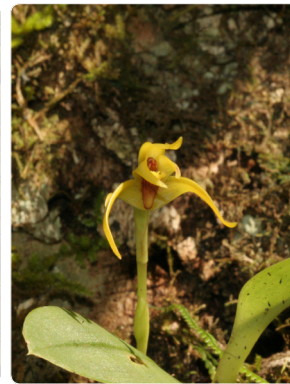
131 *Masdevalia infracta*



132 *Masdevalia infracta*



133 *Maxillaria lindleyana*



134 *Maxillaria lindleyana*



135 *Maxillaria lindleyana*



136 *Maxillaria ochroleuca*



137 *Miltonia kayasimae*



138 *Miltonia kayasimae*



139 *Octomeria crassifolia*



140 *Octomeria crassifolia*



141 *Octomeria crassifolia*



142 *Octomeria crassifolia*



143 *Octomeria gracilis*



144 *Octomeria grandiflora*



145 *Octomeria grandiflora*

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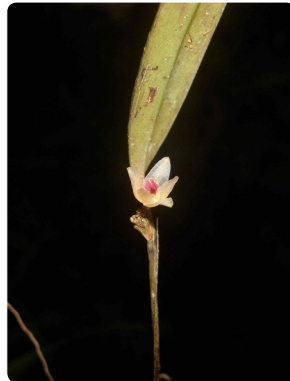
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146 *Octomeria grandiflora*



147 *Octomeria grandiflora*



148 *Octomeria tricolor*



149 *Octomeria tricolor*



150 *Pabstia jugosa*



151 *Pabstia jugosa*



152 *Pabstiella* aff. *trifida*



153 *Pabstiella colorata*



154 *Pabstiella colorata*



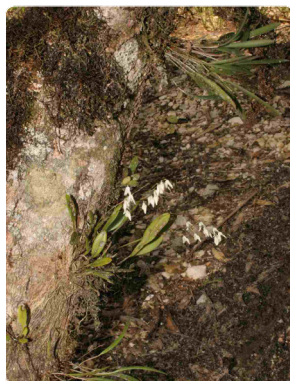
155 *Pabstiella colorata*



156 *Pabstiella fusca*



157 *Pabstiella fusca*



158 *Pabstiella pterophora*



159 *Pabstiella spathuliglossa*



160 *Pelexia* aff. *macropoda*



161 *Pelexia* aff. *macropoda*



162 *Phymatidium delicatulum*



163 *Phymatidium delicatulum*



164 *Phymatidium falcifolium*



165 *Phymatidium falcifolium*

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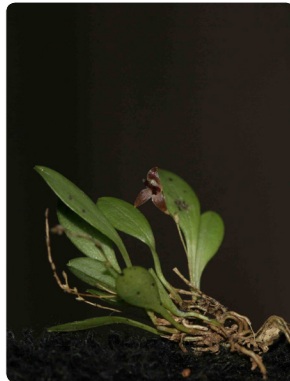
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166 Pleurothallidinae n.i.



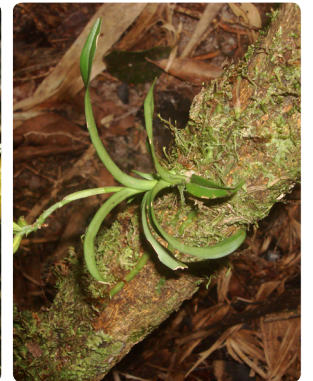
167 Pleurothallidinae sp. 1



168 *Pogoniopsis schenckii*



169 *Pogoniopsis schenckii*



170 *Polystachya estrellensis*



171 *Polystachya estrellensis*



172 *Polystachya estrellensis*



173 *Polystachya estrellensis*



174 *Prescottia* aff. *stachyodes*



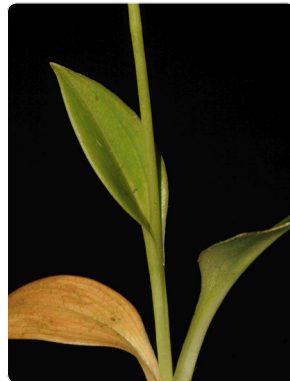
175 *Prescottia* aff. *stachyodes*



176 *Prescottia lancifolia*



177 *Prescottia* sp. 1



178 *Prescottia* sp. 1



179 *Prescottia* sp. 2



180 *Promenaea xanthina*



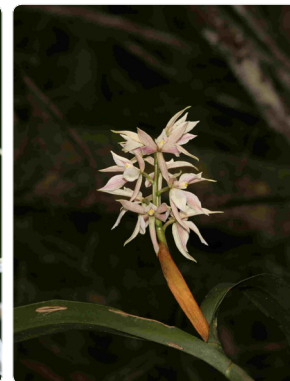
181 *Promenaea xanthina*



182 *Promenaea xanthina*



183 *Prosthechea allemanoides*



184 *Prosthechea allemanoides*



185 *Prosthechea bulbosa*

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186 *Prosthechea bulbosa*



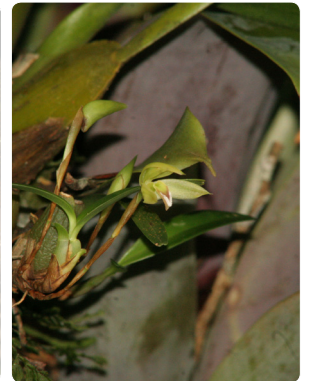
187 *Prosthechea calamaria*



188 *Prosthechea pachysepala*



189 *Prosthechea pachysepala*



190 *Rhetinantha notylioglossa*



191 *Rhetinantha notylioglossa*



192 *Sacoila lanceolata*



193 *Sauroglossum elatum*



194 *Sauroglossum elatum*



195 *Sauroglossum elatum*



196 *Scaphyglottis modesta*



197 *Scuticaria hadwenii*



198 *Specklinia grobyi*



199 *Specklinia grobyi*



200 *Specklinia viridiflora*



201 *Specklinia viridiflora*



202 *Stelis aprica*



203 *Stelis aprica*



204 *Stelis argentata*



205 *Stelis argentata*

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206 *Stelis fraternata*



207 *Stelis fraternata*



208 *Stelis megantha*



209 *Stelis megantha*



210 *Stelis papaquerensis*



211 *Stelis papaquerensis*



212 *Stelis papaquerensis*



213 *Vanilla edwallii*



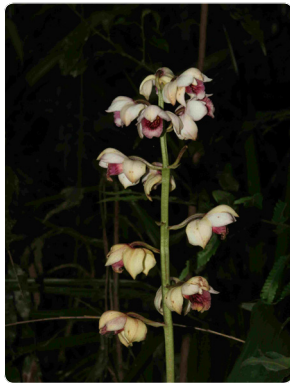
214 *Vanilla edwallii*



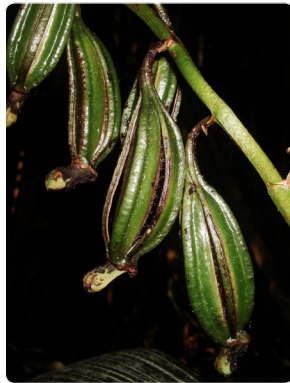
215 *Vanilla edwallii*



216 *Warrea warreana*



217 *Warrea warreana*



218 *Warrea warreana*



219 *Zootrophion atropurpureum*



220 *Zootrophion atropurpureum*



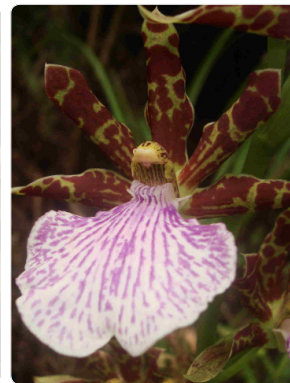
221 *Zygopetalum crinitum*



222 *Zygopetalum crinitum*



223 *Zygopetalum crinitum*



224 *Zygopetalum mackayi*



225 *Zygopetalum mackayi*

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226 *Zygopetalum maxillare*



227 *Zygopetalum maxillare*



228 *Zygopetalum maxillare*



229 *Zygopetalum maxillare*



230 *Zygopetalum maxillare*



231 *Zygopetalum pedicellatum*



232 *Zygopetalum pedicellatum*