

THREATENED LIVERWORTS of ITATIAIA NATIONAL PARK 1

RIO DE JANEIRO - BRAZIL

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Photos by: Maria Alice de Rezende, Denise Pinheiro da Costa and RB, production by Maria Alice de Rezende and Denise Pinheiro da Costa with support from Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Escola Nacional de Botânica Tropical, CAPES, ICMBio, and Itatiaia Nacional Park.

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Itatiaia National Park was the first National Park established in Brazil, in a region of Atlantic Rainforest in the *Serra da Mantiqueira*, in Rio de Janeiro State. It is the most important bryoflora conservation area in Brazil, with high levels of diversity, endemism and threatened species. Itatiaia means “many-pointed-rock” in the Amerindian Tupi dialect. The park was created in 1937 to preserve part of the biological heritage of the *Serra da Mantiqueira* and covers an area of 30,000 hectares between Rio de Janeiro and Minas Gerais States. Itatiaia National Park harbors a unique bryoflora due to presence of different forest formations and well-defined climatic and vegetation bands: Montane Forest, Upper Montane Forest, and High-Altitude Fields (*Campos de Altitude*). The bryophyte diversity comprises 519 taxa in 213 genera and 81 families (57% of the total of the Brazilian bryoflora).



Landscapes of Itatiaia National Park: Pico das Agulhas Negras; Maciço das Prateleiras; road of Brejo da Lapa; Brejo da Lapa; Poço Maromba; Véu de Noiva waterfall; and Três Picos forest.

THREATENED LIVERWORTS of ITATIAIA NATIONAL PARK 2

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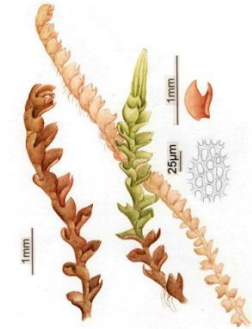
¹Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Diretoria de Pesquisa Científica,
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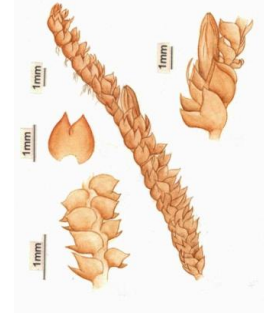
1 *Anastrophyllum auritum*
ANASTROPHYLLACEAE



1 *Anastrophyllum auritum*
ANASTROPHYLLACEAE



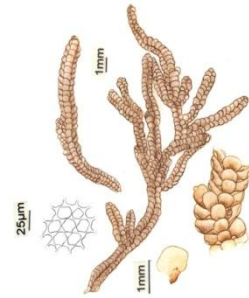
2 *Anastrophyllum piligerum*
ANASTROPHYLLACEAE



2 *Anastrophyllum piligerum*
ANASTROPHYLLACEAE



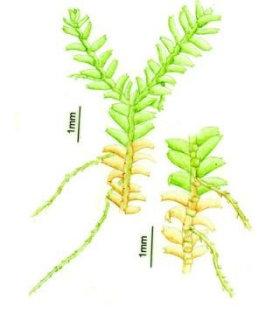
3 *Aureolejeunea tonduzana*
LEJEUNEACEAE



3 *Aureolejeunea tonduzana*
LEJEUNEACEAE



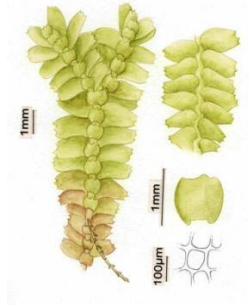
4 *Bazzania cuneistipula*
LEPIDOZIACEAE



4 *Bazzania cuneistipula*
LEPIDOZIACEAE



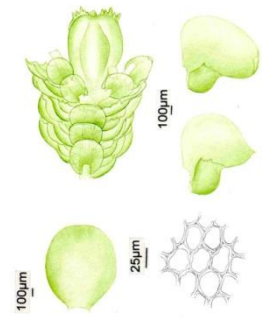
5 *Bazzania taleana*
LEPIDOZIACEAE



5 *Bazzania taleana*
LEPIDOZIACEAE



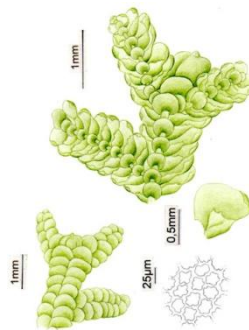
6 *Blepharolejeunea incongrua*
LEJEUNEACEAE



6 *Blepharolejeunea incongrua*
LEJEUNEACEAE



7 *Blepharolejeunea securifolia*
LEJEUNEACEAE



7 *Blepharolejeunea securifolia*
LEJEUNEACEAE



8 *Calypogeia grandistipula*
CALYPOGELIACEAE



8 *Calypogeia grandistipula*
CALYPOGELIACEAE

THREATENED LIVERWORTS of ITATIAIA NATIONAL PARK 3

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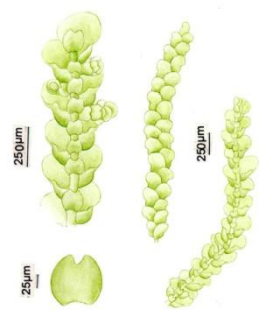
9 *Cephalozia crossii*
CEPHALOZIACEAE



9 *Cephalozia crossii*
CEPHALOZIACEAE



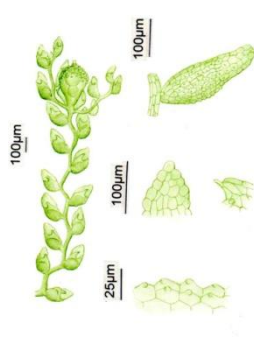
10 *Cheilolejeunea insecta*
LEJEUNEACEAE



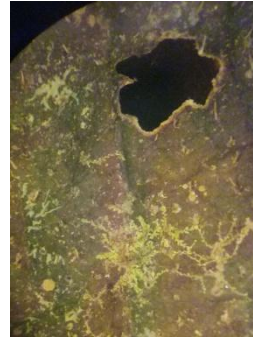
10 *Cheilolejeunea insecta*
LEJEUNEACEAE



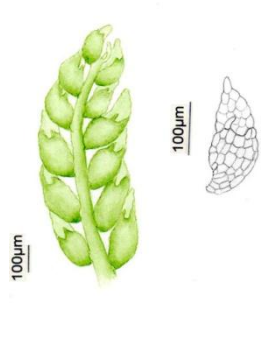
11 *Cololejeunea microscopica*
var. africana- LEJEUNEACEAE



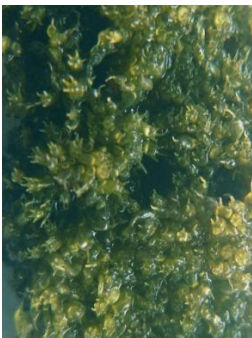
11 *Cololejeunea microscopica*
var. africana- LEJEUNEACEAE



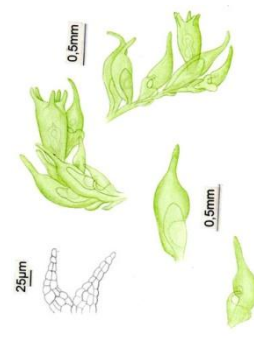
12 *Cololejeunea sintenisii*
LEJEUNEACEAE



12 *Cololejeunea sintenisii*
LEJEUNEACEAE



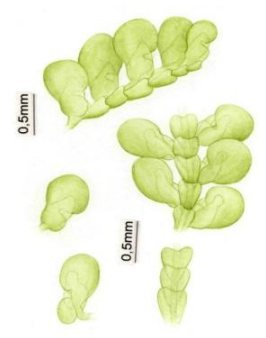
13 *Colura calyptriifolia*
LEJEUNEACEAE



13 *Colura calyptriifolia*
LEJEUNEACEAE



14 *Colura itatyana*
LEJEUNEACEAE



14 *Colura itatyana*
LEJEUNEACEAE



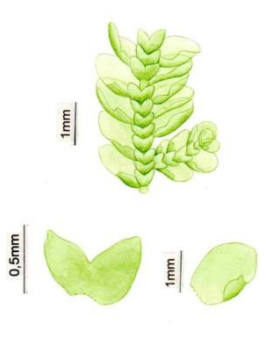
15 *Cylindrocolea planifolia*
CEPHALOZIACEAE



15 *Cylindrocolea planifolia*
CEPHALOZIACEAE



16 *Diplasiolejeunea pauckertii*
LEJEUNEACEAE



16 *Diplasiolejeunea pauckertii*
LEJEUNEACEAE

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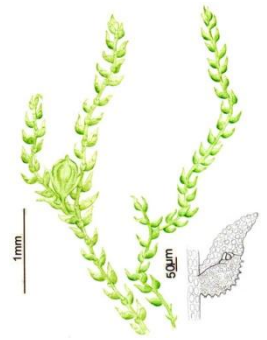
17 *Diplasiolejeunea replicata*
LEJEUNEACEAE



17 *Diplasiolejeunea replicata*
LEJEUNEACEAE



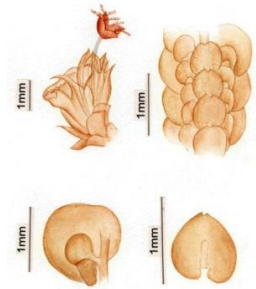
18 *Drepanolejeunea granatensis*
LEJEUNEACEAE



18 *Drepanolejeunea granatensis*
LEJEUNEACEAE



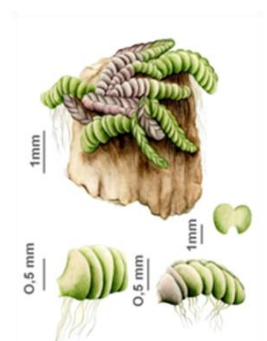
19 *Frullania ecklonii*
FRULLANIACEAE



19 *Frullania ecklonii*
FRULLANIACEAE



20 *Gongylanthus liebmanianus*
SOUTHBYACEAE



20 *Gongylanthus liebmanianus*
SOUTHBYACEAE



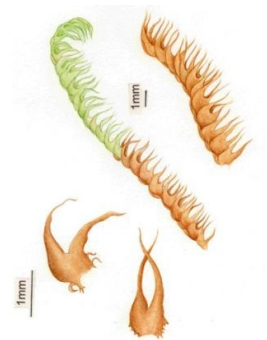
21 *Harpalejeunea subacuta*
LEJEUNEACEAE



21 *Harpalejeunea subacuta*
LEJEUNEACEAE



22 *Herbertus sendtneri*
HERBERTACEAE



22 *Herbertus sendtneri*
HERBERTACEAE



23 *Isopaches bicrenatus*
ANASTROPHYLLACEAE



23 *Isopaches bicrenatus*
ANASTROPHYLLACEAE



24 *Isotachis inflata*
BALANTIOPSISIDACEAE



24 *Isotachis inflata*
BALANTIOPSISIDACEAE

THREATENED LIVERWORTS of ITATIAIA NATIONAL PARK 5

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25 *Jensenia spinosa*
PALLAVICINIACEAE



25 *Jensenia spinosa*
PALLAVICINIACEAE



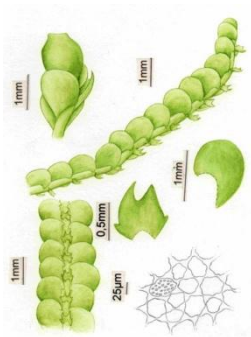
26 *Kurzia flagellifera*
LEPIDOZIACEAE



26 *Kurzia flagellifera*
LEPIDOZIACEAE



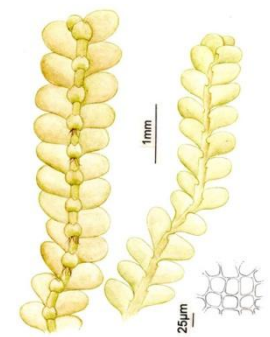
27 *Leptoscyphus gibbosus*
LOPHOCOLEACEAE



27 *Leptoscyphus gibbosus*
LOPHOCOLEACEAE



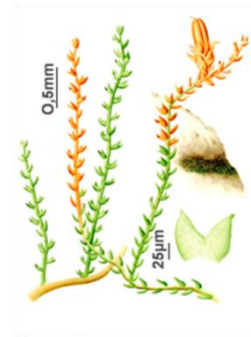
28 *Mnioloma cyclostipum*
CALYPOGEEACEAE



28 *Mnioloma cyclostipum*
CALYPOGEEACEAE



29 *Marsupella microphylla*
GYMNOMITRIACEAE



29 *Marsupella microphylla*
GYMNOMITRIACEAE



30 *Metzgeria psilocraspeda*
METZGERIACEAE



30 *Metzgeria psilocraspeda*
METZGERIACEAE



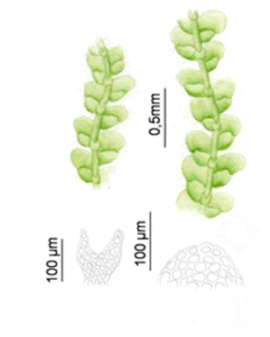
31 *Metzgeria subaneura*
METZGERIACEAE



31 *Metzgeria subaneura*
METZGERIACEAE



32 *Microlejeunea subulistipa*
LEJEUNEACEAE



32 *Microlejeunea subulistipa*
LEJEUNEACEAE

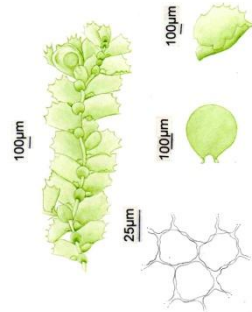
THREATENED LIVERWORTS of ITATIAIA NATIONAL PARK 6

RIO DE JANEIRO - BRAZIL

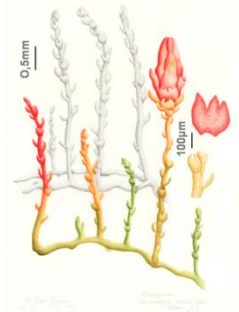
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33 *Odontolejeunea decemdentata* LEJEUNEACEAE



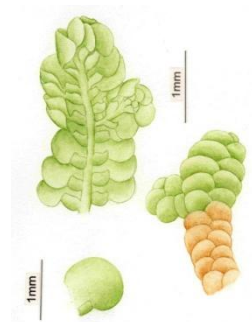
34 *Paracromastigum dusenii* LEPIDOZIACEAE



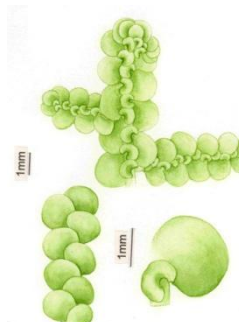
35 *Plagiochila exigua* PLAGIOCHILACEAE



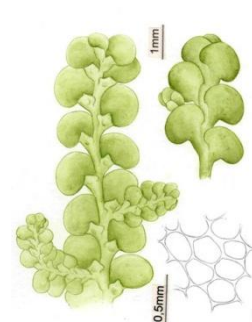
36 *Plagiochila macrostachya* PLAGIOCHILACEAE



37 *Radula fendleri* RADULACEAE



38 *Radula gottscheana* RADULACEAE



39 *Radula pocsii* RADULACEAE



40 *Radula schaefer-verwimpii* RADULACEAE

THREATENED LIVERWORTS of ITATIAIA NATIONAL PARK 7

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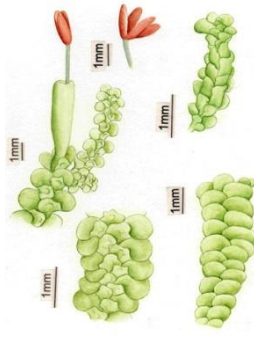
¹Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Diretoria de Pesquisa Científica,
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41 *Radula voluta*
RADULACEAE



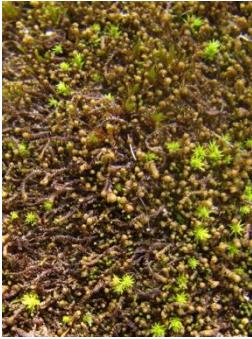
41 *Radula voluta*
RADULACEAE



42 *Solenostoma hyalinum*
SOLENOSTOMATACEAE



42 *Solenostoma hyalinum*
SOLENOSTOMATACEAE



43 *Solenostoma sphaerocarpum*
SOLENOSTOMATACEAE



43 *Solenostoma sphaerocarpum*
SOLENOSTOMATACEAE



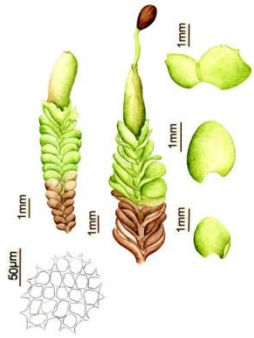
44 *Stephaniella paraphyllina*
STEPHANIELLACEAE



44 *Stephaniella paraphyllina*
STEPHANIELLACEAE



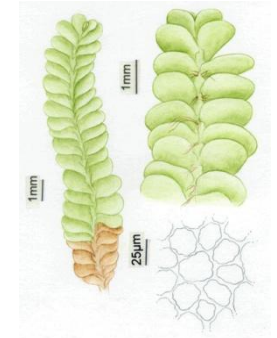
45 *Syzygiella contigua*
JAMESONIELLOIDEAE



45 *Syzygiella contigua*
JAMESONIELLOIDEAE



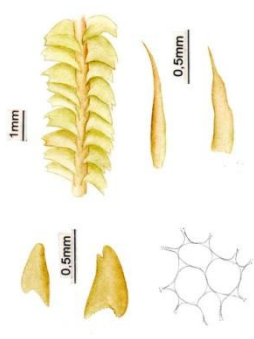
46 *Syzygiella trigonifolia*
JAMESONIELLOIDEAE



46 *Syzygiella trigonifolia*
JAMESONIELLOIDEAE



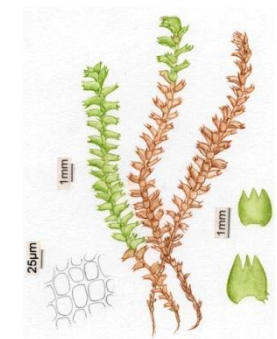
47 *Syzygiella uleana*
JAMESONIELLOIDEAE



47 *Syzygiella uleana*
JAMESONIELLOIDEAE



48 *Triandrophyllum subtrifidum*
HERBERTACEAE



48 *Triandrophyllum subtrifidum*
HERBERTACEAE