B-251L 1976

(1)

29c

NOTE BOOK

75 SHEETS

No. KB-3387

No. KB-3388

TOP OPEN
SIDE OPEN

Brasil 1976

1st Separi

2353 K, MO, NY

wings on both con

2357 (2356 best shot in
Manaus-

2357

April 3, 1976

Shirataie. 373 Km on the
circuit. 12 Km from
Shirataie, small pine
tree con 101-

~~Atractantha~~

Atractantha sp.

Alt = 350 - 400 m.

Forest, most ~~very~~ cut
down and disturbed
especially in lower part
of mbrs.

Total to use plate
on road

13.7 m.

1,70

2

2

2

2

2

2 m.

base

Abundant in ~~disturbance~~
forest, dominant in
higher part of woods.
Dominant, ~~class~~ 1
Delicate, thin, small
bamboo, climbing,
and leaning over other
plants and trees. Very
weak and thin ~~with~~
culms, overarched

One main branch dominant
with a crown of small
one at the base. That
central axis most of
the times takes over
the main culm (whether
broken) and take the
lead, keep going up.
On time, another central

axis of a lateral such
continue going -
shoots very small, low
specially in upper part
of hill, where forest
is ~~less~~ more dense
and darker. Many
new culms, very
thin, even for no more
than 3 m, then
weak and airy.
Culms solid, flexible
thin, the very old at
the base ~~is~~ up
to 1.5 or 2 (very few that
thick.) Culms with a
ring of air canals
near the walls.
Surface of culms very
smooth, no hairs or
wax.

Dark green.
bluns small ~~not~~
sometimes no more
than 6-8 - no
more than 0.5 m. in
diameter.
A ring of stiff hairs
at the base of the
culm sheath, on the
node.
Culm sheath persists
at on the new culms,
only late deciduous
at when the branches
start to grow and
expand. The culm
leaf blade horizontal
to reflexed; , many
times curled, ~~concealed~~
concealed.

In the same mono
in lower parts mixed
with a Heritiera of
which ~~that~~ seem to
grow up the hill-
leaf small, narrow
very thin & delicate
They do not roll up
easily when culms
are cut -

Culms up to 14m
±; but most of
them very thin, 1/2cm
in diam. and very
small.

FAA: 3 nat.

2 large with mouth.
with buds & stipes
and culm pieces.

1 (50cc) with leaves.

3 small clumps collected
for cultivation -
Photos:

W. & B. roll 13. (± from
15 to end. and roll
14. beginning to 4

Color: Ektachrome:
roll (15), from 1 to end
lost 6-8 pictures with
wide angle -
beautiful forest.

K, MO, NY,

April 4

2358

~~2358~~

Merostachys dermiste.

Mun. Tibirataia, 23 Km
N; NW of Tibirataia city.
On top on slope of
hill - "cancallera"

Alt. 250. ~~Bar~~ + 17-

Plots B. & W. Roll 14 (405 to end
Ektachrome roll 16; + 2 barrancos

1 to $\pm 1/2$ -

In ^{natural} forest, at present, Big
being partially cut.
Forking + small clumps
about 60-70 cm in diameter
not many culms in it -
climbing, only the new
culms erect for about

5-6 m, then leaning
~~on~~ on banks and
trees -

~~all to~~

$\pm$ 13-15 m tall - long
internodes.

Bulbous hollow with
thick wall - ca. 2-2.25 cm
in diameter. Surface appears

"life", light & very dark
green ~~mottled~~ (can
branches clear, young)

Nodes thick, a little
prominent, covered by a
velvety dense, white web of
white, silky hairs. The
node in itself, below
 $\pm$ 2 cm and above the
ridge $\pm$ 1 cm the white area.
Bulbous leaf deciduous at

young shoot

19.70 m.

Adult plant.

* 42

52

59

64

67

75

76

79

87

90

89

81

77

65

62

58

66

62

32

12.76

0.76

2

2

2

2

2

2

the beginning of the bud
development; culm leaf
blade narrow, & reflexed
deciduous early. Culm
leaf with strong &
also light-dark striations
Branch Bud complement
One prophyllum (with 1? or 3? ~~3~~ ?
buds) in the nodes
of lower part of culm.
Early development: 3
very strong, similar
buds adjacent in one
line, each with its
~~own~~ own bracts & prophyllum.
Original prophyllum very
white, large and dark.
Branch complement
~~of~~ initial primordium
five rise to 3 branches

Usually one of the side
buds ~~at~~ start develop-
ment (on the side
the sheath opens -
It forms a branch
complement of 3
equally dominant
branches. Late, (sometimes
early) each one will
give one side branch
from upper nodes of
represented base of primary
branch, sometimes, in
older culms, a second
branch is born on
~~the top~~ on upper node
of the 1st axi-
1st axi (3 =) very thick
much more than
main axi of culm.

with base inflated, cores
by several short bracts
Base of these axi is
~~with~~ represented, a series
of very short, but
distinct internodes.
In the 2nd branches
almost always res-
pond 1 or 2 "roots"? but
or would, tip prominence
culm ~~has~~ not divide.
only branches at nodes
branches with leaf comple-
ment very large, 90-
1.25 m $\pm$ long - with
several ~~leaf~~ leaves.
leaf blades very large
long and wide, thick,
smooth, flat -
oral ~~with~~ etc several

are long, white, silky,
curly just the tip -
White ~~very~~ long hairs
only at tip & recurrent
on edge of sheath.

M. ternate seen in
another hill $\pm$ 14 km
south of this locality
(The original one of
1972) At present
only vest of that
original forest M.
ternate is almost
gone, a few plants
are ~~scattered~~ surviving
low. In both locali-
ties M. ternate is in
the lower parts of
the hill slope, then

starts Merobary sp -
(may be, thin culm
& thin, small leaves)
and in the upper parts
of hills only. Atracta the
seen in the first area
and Atr. mixed
with another ~~still~~
seat M. in honey
in this hill -
M. ternate grows in
beautiful, wet forest
tall trees, with
many lianas,
~~stipitate~~ & climbing
plants.

In this area grow:
M. ternate in the lower,
part, then Merobary
thin leaves (CEC. 2359)

A little higher. Meront
thick mixed with 1.
Meront. On upper slope
of hill M. sect. (in flower)
and some strobil. 1.5g.

FAA. 2 large nbs with
buds. 1 small 50 with
leaves.
rhizome collected.

Merostachys

2359

thin leaves

April 5, 1976

Hum. to Thirataia, 23
km N-NW of Thirataia
city. On upper ~~part~~
slopes of hill on
the right side of road
concretely with main
BR 1001.

~~Small~~ Delicate Meront
dry in rather small
clump. Weak, thin
culm, climbing to
leaving over vegetation
bulm and culm
leaves very sparse.
Dark green mottled
bulm thin 0.75-1.25cm
in diameter.

FAA, 3 vials 2 with
bud, 1 with leaves
Pigeon collected -
no photo yet

Node without upper ridge
not protruding, it will
with the last, over it.
Probably sheet in the

How almost very scarce
few, not so abundant
as in the other Merote-
chys.

April 5,
Pirineo

2360

23 km. N^{-NW} of Thinstare.
on the road winding with
BR 101 - Fagundes
Macedonia.

Alt. 250 -

Common in shaded
places of forest, with
rich leaf mold,
near base of trees or
fallen trees.

May infl for the
base in long slender
culms - only 2 plants
with inflor. on main

culm -

FDA - 1 vial, less a vial -

Boq - 1 " flowers -

2361

same locality -

Alt. 250 - 275.

Pteridophyte -

In humid forest
with many other plants -

Pteris, etc -

Bright bluish green
completely different from
the rest of all other
seen in forest -

Specimen collected to cultivate

2362

April 5 -

Same locality.

Alt. 250 m

Leaves like

At the edge of forest
on sharp slope

2363

Tephrosia -

Same locality - Alt. 250

At edge of forest
on slope, near
M. ternate

April 6

2364

Meriania sp. (v. 3)

Waxer, thick branches -

Same locality, in forest,
part of slope -

Alt. 250 m.

See the union
of 3 buds in large
old culm in lower
part. ~~the~~
bud start developing
from side of stem
opening.

At the end of young
several buds
but they are very thick
buds, not already
over-representation
but leaf blade
narrow, reflexed
and deciduous.
Leaves wide

FAA - 2 vials, fresh
and dry.

far from ripe
collected

Plots: B x W h' roll #
17, (21 to 36)

color. h', roll # 16

28 - to 37 -

April 6 K 2365
Olyra (miretho?) Santa

Same locality, on upper
part of slope -
Alt. $\pm$ 300 m -

Large clump, culms up
to 3 m.

Some old inflorescences
and in the same
plants in lower #3
node a huge sun-like
bush of leaves with
small leaves -

Beautiful forest, with
tall trees, many lianas
and climbing plant
epiphytes,

Some of the tree:

~~Guera~~ Gueraua branca
Gueraua semelha →
Leguminosae, Mimosa
Parkia pendula -

J. Stanea: genus Mutiguga
Leg.

Louro: - Lauraceae
Ocotea or Nectandra.

Araca: Mirtaceae.

Oiti: Burseraceae

Oitizica: Moraceae

Pau pombo: Anacardiaceae

Tapirira guianensis

Bapessa: Sapotaceae

Sumora preto: Moraceae

Piqui preto: Buriocaulaceae

ser. buriocaulon

Jatoba: Leg. - berberis

Heminea corfarina

tararanga Moraceae

ser. Pukuma

2366

April 7

Same locality (Jenna
to Meritochys)

Alt. 300 m.

Seedlings of M. in pines?
(multicaules?)

Many seedling of # size
some still very small
around dead classes

naltirenee?

Merortachy - juv. - 2367
April 7, 1976

Mun. Linstair, - - -
same loc. (kno do
Merortachy)

Act. 300 -

In upper part of hill
in large clump, all
dead and without
of flowers. ~~then~~
seems that plants
had flowers for long period
all culms with no leaves
but in flor. Only in
one or 2 culms still
some culms a little
green, and only in one

we saw a new culm
and another with
bracts and green
but no flowers. It
was next to a dead
culm. Still thin -
Old culms very robust
± up to 4 cm in
diameter, thin wall
anthers, Node not
thick nor protruding
but marked on
one side by 2 lines
(inversion of culm
sheath?)

Probably up to 15-20
m (not measure)
They ~~do~~ think that
the bamboo had
died probably no more

then 3 months ago
for the ~~first~~ 40 letters
over - in 6 months

In the same area is
abundant and growing
in association
Atractantha (same
as 1st collection.)

lobed gamopetalous, pieces
of culms, herbaria
PAA (for the first one)
buds & leaves (2 vols)

Node with somewhat
white hairs -
Lignose asperous -
culm sheath persistent
at base -

2368

April 7

Merostachys -

Mn. Shintara, 12.5 km
from N of Shintara city
on right side of road
(same loc. where I collected
M. ternata in 12) - Manual
counting with BR 101
Alt. 275 - m -

Photo: no time -

FAA - 2 nals -

very large with roots
with buds

and small with buds -

1.2

1.5 cm diam.

Lign. wood

18

23

26

13

34

13

36

14

39

15

37

16

30

18

14

19

7

21

8

21

19

23

20

23

6

23

12

21

15

20

14

18

14

18

11

17

12

10

16

12

10

17

= 7.82 m

In lower to medium part of slope of hill partially cut down and destroyed.

Form ± less dense. Overarching on repetition. In rose flower, the higher in arborescence with Atractantha sp. From the up - only Atractantha dominate. Culm prostrate, thin wall - ca 1.2 - 1.5 cm in diameter, very smooth and glabrous, bluish green, covered by waxy powder, white. Nodes without thick ridge, sheath without

sclerotic, ± white
narrow band left over
for sheath?

Many broader per node
small-medium thickness
in typical Menziesia
bud arrangement.

Bud complement with
one large prophyll and
several? buds, I saw several
or at least a few even
in lower nodes of
culm.

Culm sheath deciduous
persistent but not recumbent
with reflexed, ciliate
blade.

Leaves lanceolate, narrow-
medium to small size
few and short and

setae -

April 8.

2369

Mentachys.

Faz São João

44 Km N.W. of Ipian

At side road toward E

from Rt. to Brezane. Jag-

from asphalt (correteira
Ipiã - Jaguara - 28Km)

see next -

Alt.: 750m.

Top of Lilly ridge
with beautiful dense forest

"More type of forest, dense
 skin trees not very thick
 many palms *bidulicarpa*
 common on top of trees
 Palms: "oricana" photos
 taken when S.B. & W.
 Another yusara (they
 collected in Porto Seguro)
 Oricana 2-3 m high
 with fruits -

Meristachys ~~very~~ abundant
 under the trees. culms
 1-1.3 m tall, very
 smooth, covered by white
 wax, node smooth
 not prominent.
 Culm sheath smooth
 blade reflexed. cespitose

eat when walls thin
Delicate Santos, with
thin small leaves -

It is similar to the
one collected late
yesterday but here
leaves have white
long very curly oval
retic. - Like wool-
bud complement -
sheel Menziesii type
tipico -

Forms dense clumps,
climbing over, repeats
but lower than
tall trees -

We saw this Santos
at much lower elevation
350?± but less abundant

look similar in part
to Menziesii sp. (666
2368) but that (2368)

has thicker, culms, larger
leaves, in forest looks
a little more robust
~~and~~. This one has
thicker, curly, oval retic
the other one per ~~and~~
short.

Forest is finer than the
one on the other
serra (Fay. Macedonia)

FAA. 2 nodes, one large
with bud, 1, 50cc with
leaves.

Plots: B. & W. roll.

Roll 19, for typing? to

half? ~~was~~
color Ektachrome roll 21
or (18 to ~~hien?~~)

took photo in rainforest
in Jaquegumbe country
forest of pay São João
Apua, tented up when
change lenses from
wide angle to up close
lens -

2370

Athertonella

same loc. but lower

Alt. 650 - 600

3 km from entrance of Jaquegumbe
41 from Jiaí (25 from
road to Apuaena).

Photo. B & W roll 19 (27-36) &

Living plant collected.

(3 ~~very~~ fine of
vigour)

color roll #22

Very abundant in dense
forest $\pm$ from 650 -
near also 600 and
locally some lower
climbing forming thick
mats of branches
with trees and other
plants.

Very difficult to cut
down "one" plant -
keeps spreading over
other and branching.

Leaves $\pm$ thin -
at base of old ones:

Young culms dark almost
black green very smooth
flexible, $\pm$ oval -
a little

alp

Photograph to 18 mm. 20
in. I don't expect to
take one to much
without breaking

1.15 mm.

2
2
2
2
2
2 mm

calves leave ~~with~~ peristalsis
and late decidua
when broods start
to develop. and it's
push out. It falls
very late, sometimes
peristalsis very old.

Brood with black
scutons first. Longitudinal
to reflect a little but
usually with black
curl in concave
fashion up 74
~~Not a cat~~

Back of sheath with
thick callus scar at
base on dorsal side
band of stiff golden
hairs toward pit
like eyelashes.

broods in tropical
in development.

One central brood
sometimes not developed
on both sides may
very small, and
all equal 2nd brood
buried one with
upset base. Very
fragile and broods
developed and keep
on back without
Plot keep healthy
and a broodship.

Very weak plot to
~~be~~ ^{be} event for more
than 2 meters.
Some seen clinging
very high on trees
but along dike

Delicate plant -
culs $\pm 1.2 - 1$ cm in
diameters.

Leaf thin small
seen the same of
Thiotaia (alt 2357) but
much taller.
Beautiful here, close
forest.

Oral setae a little curly
also golden.
I also see mixed with
Astranthus Thick Merote-
chys seed, flower not seen
to rotunda and old, it seems
same as in Thiotaia
M. multivirens?

April 9, 2371.
Moniocaulis glabra
Guadua? (Toree?)

Alt. 320 m?
Fazenda Jusara
Município de Japunaquara
4.5 km N of Apudema
on road to Japunaquara
(~~at~~ right side of road)
Hilly region, on both
sides of road.
Lower part and middle
part of slopes have
been cut down, only
on the top part
remain, sometimes
see this is disturbed.

52 km from Ipiaú

Leaving plant oriented.

Growing at near the edge of ~~cut~~ forest (rest of cut down area) in higher part of slope of hill. Higher up only *Merete* chys (rest of *Glinsterik* c.c. & T. #2368) Bucking over repeat - Medium chys not crowded. bark 2.25 - 2.5 found only 1 piece old & rotten very thick 3.5 about 40 bark smooth sometime slightly aspers in some part of the plant

Nodal zone with 2
ridges with left
of files for
sheet in
lower ridge

Sheath ³/suberect blade
erect with auricle & oral
lobe, like *Bambusa*
peruviana, only late
deciduous, when bark is
lustrous, and ^{smoother}
with wine color
spots - (natural?)

but hollow & thick
wall, given with very
very small hairs, shiny.
see p. 100.

Bud complete: in
lower node only one

small bud?) at least
one prophyll near.
Develops a central
main axis and 1, 2 or 3
on each side, much
smaller. On thicker
new culms, the central
form a thick branch
very long. In others
is not so dominant
like branch with
the culm sheath almost
persistent or late senescent
and long prophylls
culm sheath persist
very late, dried and
the tan color, like
dried leaves. Not
spines -

It does not look like

typical bamboo to me,
at least the ones I've
collected before.

Grows in a small
area, probably the
~~rest~~ of what was
before a beautiful forest.

Photo B & W. ~~will~~ will #20

1 to - 14A

Ektachrome - from ~~15-17~~
to ~~33~~ (not ~~34~~)

FAA: 2 rats - large with
buds, small with
leaves.

1 small bamboo collected
for cultivation.

leaves very smooth
long, narrow

with quite asymmetric
midrib.

culm sheath thick, especially
at base and fibrous &
when they fall they leave
fibre attached to node

In same area we just
collected *Meritochys* from
São João.

leaves will almost
in minute of cutting
the branches

April 10

2372

Atotaxia cordinalis?

6 km from Apurimac
toward Japaguana
on road Ap-Jap.
From a felto 5.3 km

Alt. 275 m.

Mun. de Japaguana

20 cm 3.5 m 10.20

2 medids logi
the total

X2

-2

lower in small patch
of forest, rest of
cut down - on a
smooth slope -
thin twig, very compressed.
About 10-11 cm or
probably more, break
down of the branches
when I pull down.
break thin to 1.2 cm
diameters - solid and
hard, almost woody
at base, ^{a little} softer upper
parts, "lign", "spongy"
at base of internode
above branches.
Node with hairs, a pointed
ridge. No petioles.
~~One~~ One central very
laminated & thick

back, and may, may
thin on both sides
Prophylla a bracte, white
to anacae.

culm sheath persistent
in lower part culm
when no bracts develop
they dry up and often
of culm. Very thick
at base and toward
side, with thin

papery edges, sometimes
quite large and a
~~small~~ row of auricle
or expansion of
sheath at base on
opening. On the
back a very thick,
prominent, dark,
black sometimes,

collar. Sheath very
to dried and become
papery and mucous
on edges, very white
sometimes or at base.
white?

the very small, few
noticeable oral
retae.

Culm when very thin
no so much mucous
less very thin, delicate
small.

FOA Bud.

fol. 8 W in roll 20 and
1/2 of 23

older Ek. 22 in or ~~20~~
and beginning of 24
brakes with leaf
wheat braked

at base, with very
small internodes.
In some part from
Merostachys thick herbs
collected in Thirakia (Coccoloba)
no collected here.
Here Merostachys from beautiful
shaded, tall and thick.

Niorea K, MO 2373
~~Alsinia~~ filiformis
same locality 10 April 1976

Only one large clump
found under shrubs
in $\pm$ open and
 $\pm$ disturbed area near
edge. Near Atlatla the
Tall, thin, and weak
clump $\pm$ 1 - 1.20 m
not ~~set~~ erect but
blend over with the
rest in fl. Flowers
white.

FAA. base & spikelets
Photo. Box W, Roll 20 from 22
color Ekt. roll # 24, ~~roll~~ 29 to 38
of roll # 22 (part in rest
roll 24?)

to back.
 $2 + 32 + 2 + 2 + 2 + 1,90$

10.22 m

April 10

Moniscanthus hirsutus 2374

Bontas gracilis?
 (on floor)

Net. 250 m.

62 d. Spicini

9 d. Apuanema

46 d. Entocoda

of Apua-
 at road
 46 km from
 at road (A
 Tiani)

in floor,

rec -
 ll #23

24 (18 to 32)

46 Km
da Entrada

9 de Apuaranema

62 de Ipiaú

62

46

16

is back.
2+32+2+2+2+1,90

10.22 m

April 10

Monocaulon hirsutum 2374

~~Benthamia~~ *guianensis*?
(on fls)

Alt. 250 m.

Mon. de Japnaguan

9 km N.W. of Apua-
rena on road to Ad
Japnaguan (46 km for
entrance of that road &
61 km for Apua)

FRA: 3 : buds, inflores,
leaves -

Long. 1 : inflores -

Photo: B & W. roll #23

Ektoch. roll 24 (18-32)

culm diam. 2.5-3.5 cm
with max.
in. etc -

sheath with golden brown
stiff hair,
~~the~~ culm free ^{edge}
by white hair ^{like wool} or max
come off by rubbing
Node not prominent
small narrow black
ring, rest of sheath
whitish, remain
culm sheath very
late deciduous, with
erect long & rather
large blade, auricle
long oval etc.
Back with brown
golden hairs, very
stiff, hard to touch

But complete, one
but see horn in culm
back w/ pl. : start
a large main shoot
and 2, 3 or several
much smaller shoots
at sides. Beautiful
bracts covering culm
with very
thick woolly wool, very
small lines in
small bracts.
In ~~one~~ a few spots
in glaucous, very long!
spikelets

2375

April 11, 1976

Chungue (Ritteria) 4-

Mn. Jopnechane, 38 Km
SE of Jopnechane
city, on road Jopnechane
Pinarand -

Alt. 350 m. s. n.

Forest on hills slopes
out from top to edge
of stream -

Very abundant on lower
part of slope and
along the stream
and slope road.
Including bamboo, oak
trees, herbs and

leaving over other
repetitive - but mid
retention - in
about in in
sides etc.

bulbous sheath very
first, narrow with
blade narrow acuminate
erect, almost without
transition

Node thick, promi-
nent zone with
2 ridges, like a
leathery band, very dark
almost black. A
membranous extension
of base of sheath
extends downward
covering the buds.
It breaks, in vine

is imbricate or at
center - Then the tip
of bud push that
most away.
bud complement of 5-
seven in a ~~ring~~ are
around a central one.
Those developed first are
Are they really all ^{with} independent
prophylls? After the
opening of that "capsule"
brakes they look like
Meristems.
bud ending in large
- median leaf whorl
with a thick,
black node near
base, as an arti-
culation.
Plant look now

full developed and
mature with
old culms woody
and strong at
base

branches with leaves
develops in opposite
direction from apex
of culm

Articulation of
axis, (branch) of
leaf-complement
very noticeable, toistic

leather type of
tissue, salk.

Sometimes we find
nodes a small
bush with leaves
developing

Tall bush can

number ± 18 m.

diameters $\pm 1 - 1.75$
spans 2 in larger

FRAA: 2 rich, bush &
leaves

Photo S & W. roll 25

late 25 $\pm$ 7 last part of roll 24?

color Ektach. roll ⁽²⁶⁾ 25
28 - ~~28~~ - (last also of roll

~~28~~ 24, (33 & 34 Pet seque

with Kieselson! -

35 to 37.)

April 11, 1976

2376

Merostictus (from!)

Alt. 550 m -

Mun. de Japaguana

Red. Zap. - Apurimac

35.5 K. from Japaguana
city.

Near the road on
west of fort, ~~growing~~
growing on ~~the~~
bank of savanna.

The same bamboo seen
several km. to + west
in a forest on steep
slope abundant.

FRA - 2 vials but a large
Photo: ~~B&W~~ ~~with 25 + 26~~ ^{no}

Ekte: all color with 26 - better
or 25 30±

16	36	47
2	35	48
2	32	50
2	33	47
2	*32	44
2	33	36
2	33	31
2	35	39
2	35	44
2	35	47
2	34	48
2	36	52
2	35	50
2	34	52
2	36	51
2	35	50
2	29	47
2	26	48
2	20	47
5		

Bud complete Δ shell
with sometimes 3
lines of buds
leaf sheath smooth
very soon deciduous,
thick, brown dried color
smooth, striate,
narrow above with
reflexed, small lobes
very soon deciduous -
leaves rather large
narrow lanceolate
glabrous, no oral setae
leaf sheath shiny
brown inside

April 12

2377

Atractantha (ouranosta)

Mun. de Japareguara, 22
km SE of Jap. city
on road to Apuarema

Alt: 650 m. s. m.

Part of fruit, at feet
small patch of
capoeira. Very abundant
all over under the trees
and climbing or growing
does not form very
large clump but
covers large areas
branched and branched
short in fruit to
show where one culm

end - robust, and
keeps going. looks
like *evrododera*.
Culms very little or not
erect and self-supporting
bending, crawling or
arching over rept.
Main branch, in time
extends and go farther
up a so on -
Culm solid, on base
of plant, thick old culm
very hard, midrib
and thinner branches
no so hard, herbaceous
texture. In these late
branches a very clear
ring of holes can be
seen near the epikorm
at base, in woody

culms not seen. Surface
of culms very smooth
green, shiny - in
smaller branches sometimes
turns violet. Culm of
O section (same as
section the last street.
with ear in sheath.)
Culm sheath persistent
only push away when
branches develop, may
remain in the plant long
time. Sheath smooth
glabrous with long
~~and~~ white - or gold, with
oval setae, dense at
along margin -
lanceous very little
developed in thick new
culm or not developed
in small branches

Thick band of golden
hair at base of sheath
and node. This one
seems to be deciduous,
the hairs fall. They
are present in new
culms. In many
branches is not there
there.

Nodes with prominent
ridge. (Lanceolate
foliaceous hairs at apex)
Culm rounded and
curved on the opposite
side of buds.

Bud confluent with
dominant central
axis, several (but
not many - many)
branches on node. Bract?

and prophylls very developed
Sometimes, high in
branches main branch
does not develop

Branches of 2nd order
(carrying the leaf comple-
ments) with short
internodes at base and
thick nodes, sometimes
bract.

Leaf sheath well
developed, leaves narrow
but not so small
as in the others. Atrich.
Oral setae - long, white

FDA. 2 nels large
in ph buds a culm
sections and 2° with
leaves and + culm
sections

Photo: B. & W. roll # ²⁵ V-10
ultimer a roll # ²⁷ ~~27~~
1 to -

Enter: roll # 26. cont
6 ± - and roll #. enter
28

long part wasted

Saccharum villosum Steud
det S. Renvoize

April 12

2378

~~Photograph~~

M. Japonegano - ± 22 Km
from Yaguap. city
on Rd to Apurimac

Near patch of forest
with *Atractodes*.
In swampy depression
in some part in
mud or water.
Tall grass in clumps
up to 2.50 m +.

FDA - IV. grass with
hairs a in flwr -
Borg - 1 nels in flwr

April 13

2379

Men. Jaguaquara, ca. 9.5 km SE of
Meritachy (joso in flower)
Jaguaquara, Faz. Mundo Novo. Elev. 700 m.
dominant to 10 throughout medium dry
forest, forming dense clumps, the culms
leaning over trees, up to 15 m. Culms with
thick walls, hollow in small branches,
otherwise filled with soft pith;
surface asperous, up to 2 cm in
diam. Nodes with prominent nips
and many thick branches. Culm
leaf long, narrow, triangular at the
tip with extremely reduced blades,
present only at the top of new
culms, soon deciduous. Sheath drying flat
on upper part and becoming reflexed ^{found}
in post flowering stage, but only in
one small patch.

2380 Meritachy

2380
Meritachy
Jaguaquara, Faz. Mundo Novo, ca. 9.5 km S.E.
of Jaguaquara, ^{city} Faz. Mundo
Novo. Elev. 700 m.

Growing in a patch of
medium dry forest where
another species of Meritachy
~~is~~ (C.E.P. 2379) is
dominant. Culms hollow
leaning over trees; 1.5 cm in

diameters and shrubs to
10-12 m high. Surface
of culms smooth, covered
by a white wax. Culm
leaf, deciduous with reflexed
blade. Foliole leaves
with curly, white, oral
setae.

A few feet west to his
good & lately one in
too good.

Roll # 22. E. 100 ft.

April 9 - 500 yds

arrived at 650 Athol
you sign 7, 100 ft
of 500, 100 ft out
from the same track

N.W. - high water -
A few feet from the work

to show signs of
100-500 yds ± half?

April 10: Arrived
Roll # 23 -

Roll # 23

lost back completely -
3rd M. Thoma -

- We 15 7 20⁺ to and
3rd M. Thoma, thick
branches - fairly good -

Roll 18 (Ektachrome) (18 B&W)
1st Thoma?

Microfocusing top some fog.
Roll 19 B&W
Apr 9

Microfocusing - 750m. fog.
7 Thoma the same fog -

Roll # 20 E & W -

Apr 9 - Microfocusing Thoma
7 10⁺ and some a bit
more from - date 22.
Apr 10: Thoma 7 10⁺ &
to Thoma -

Roll # 21 April 8 Ektachrome
Microfocusing 750, some
750, Thoma -
Thoma - date 15/17

Pat stopped - that
with wide angle OK
then slope less, report
to west corner -
Microfocusing 750 -
Apr 9
B&W?
and Microfocusing of Thoma

Roll # 17 B. & W.

2-7. Parage de la lorie

gadyore po tute de

heme Mestobly. (Fopre

Mestonia)

7 to 15 n + bark

weakest & young

bark complete of

M. tennate -

15 to bark. 30 Mestobly

(Mick knots -

Roll 16 Fhtool

1 - to 20 ± M. tennate

(a for t.a., M. 5, 6

(air between parage de

some can follow the

the fern & Mestobly

the bark complete

2378

Sept. Oliveira
R. D. Moreira 163

In Antonio Aug. 28 1862

Topo San José
altura 1104 ft. 130

2378

- 61 ~~re-sano~~
 2362. *Ichneumon* - inf + free
 2363 - 11 inf tip parian.
 2364 *M. n. n. n.*
 2365 *Olys (f. m. n. n.)*
 loc. n. n.
 2366 - *M. n. n. n. n.*
 seedling
 2367 *M. n. n. n. n.*
 multicellular?

Calderon
 note book

- 61 *Senecio*
 2362. *Ichneumon* - inf + frs.
 2363 - 11 inf tips parian.
 2364 *Montanoa*
 2365 *Olyra (f. m. the)*
 loente
 2366 - *Merostachys* fls. -
 seedling
 2367 *Merostachys* fls.
 seedling?

MADE IN JAPAN