161-228

mount 2 per
sheet bond paper

10/27/1920 - 11/04/1920

M. M. W's &

B.P. 9.

744

694

814

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64

1189

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897

884

Iron last page
Xerox?

Route map (sketch) 9 p.

Siam, Burma, Assam,
1920 - 1921
Rock

~~Index or List sheet~~
~~Locality list~~
No 161 - 952

- (A) Journal first 34 pages
- (B) List of coll. Smithsonian sheet list
7 239 - 952 30 p.
1500 - 1527 2 p.
List of Gram. Seam 2 p.
- (C)
- (D) Local names of plants. 3 p
- (E) map sketches 9 p.

Table of Contents
Type

Rock, J. F.

Siam

Journal

etc.

1920-21

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U. S. Department of Agriculture,
BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

FIELD NOTE BOOK

OF

Mr. _____

161-2250

(Official title.)

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U. S. Department of Agriculture,

Washington,

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

8-3216

D. C.

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 161 S. P. I. No. _____

Collector J. F. Rock

Locality South China
(Sketch exact locality on back, if desirable.)

Habitat dry ridge (rock)
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit Tree
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name

Local name Dialect

Field No. 162 S. P. I. No.

Collector J. F. Rock

Locality Sai Chuan Chuan
(Sketch exact locality on back, if desirable.)

Habitat On summit ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet meters.

Habit Tree (pub. stopping here)
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant Diameter breast high

Flowers
(Odor, color, etc.)

Fruit
(Kind, odor, color, taste, etc.)

Special notes
(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Oct 27/60

Trunk.....

Crown.....

Bark.....

Sapwood.....

Heartwood.....

8—3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name.....

Local name..... Dialect.....

Field No. 169 S. P. I. No. 217

Collector J. F. Rock

Locality Open Chaco, Chaco
(Sketch exact locality on back, if desirable.)

Habitat Mountain ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet..... meters.

Habit Tree
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant..... Diameter breast high.....

Flowers.....
(Odor, color, etc.)

Fruit.....
(Kind, odor, color, taste, etc.)

Special notes.....
(Habit, abundance, associations, milky juice, etc.)

Uses.....

[OVER]

8—3216

Date Oct 27/92

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Elytranthe affinis*

Local name _____ Dialect _____

Field No. 165 S. P. I. No. _____

Collector J. F. Rock

Locality 19 mi. Chom-cheng
(Sketch exact locality on back, if desirable.)

Habitat parasite on tree
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit woody, parasite
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers red
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name

Local name Dialect

Field No. 166 S. P. I. No.

Collector J. F. Rock

Locality Near Chon Chon
(Sketch exact locality on back, if desirable)

Habitat Open ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5000 feet meters.

Habit Herbaceous vine
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant Diameter breast high

Flowers yellow
(Odor, color, etc.)

Fruit
(Kind, odor, color, taste, etc.)

Special notes
(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Oct 17/20

Trunk.....

Crown.....

Bark.....

Sapwood.....

Heartwood.....

8—3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name.....

Local name..... Dialect.....

Field No. 167 S. P. I. No.

Collector J. F. Rock.....

Locality Lai Chuan Chang
(Sketch exact locality on back, if desirable.)

Habitat open grassy ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5000 feet..... meters.

Habit shrub
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant..... Diameter breast high.....

Flowers blue
(Odor, color, etc.)

Fruit.....
(Kind, odor, color, taste, etc.)

Special notes.....
(Habit, abundance, associations, milky juice, etc.)

Uses.....

[OVER]

8—3216

Date.....

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name Carex

Local name _____ Dialect _____

Field No. 168 S. P. I. No. _____

Collector J. F. Rock

Locality Hai Chuan Chang
(Sketch exact locality on back, if desirable.)

Habitat summit ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit shrub
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 4 ft. Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 20 1920

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8—3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Sesuvium* _____

Local name _____ Dialect _____

Field No. 169 S. P. I. No. _____

Collector J. F. Rock _____

Locality San Chen, China
(Sketch exact locality on back, if desirable.)

Habitat open sunny ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5000 feet _____ meters.

Habit shrub
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8—3216

Date

Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Impatiens*

Local name _____ Dialect _____

Field No. 170 S. P. I. No. _____

Collector J. F. Rock

Locality *Summit of Mt. ...*
(Sketch exact locality on back, if desirable.)

Habitat *Shady ...*
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit *herb*
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 1 ft. Diameter breast high _____

Flowers *pinkish*
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Melastoma* _____

Local name _____ Dialect _____

Field No. *171* S. P. I. No. _____

Collector *J. F. Rock* _____

Locality *Son Chuan Chang* _____
(Sketch exact locality on back, if desirable.)

Habitat *Summit ridge* _____
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea *5500* feet _____ meters.

Habit *Shrub* _____
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers *purple* _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date *Oct 27/30*

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Canarium* _____

Local name _____ Dialect _____

Field No. 172 _____ S. P. I. No. _____

Collector J. F. Rock _____

Locality *W. C. Chom. Chang* _____
(Sketch exact locality on back, if desirable.)

Habitat *Summit ridge* _____
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit *Herbaceous* _____
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers *white* _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date *Oct 17/22*

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Thunbergia* _____

Local name _____ Dialect _____

Field No. 173 S. P. I. No. _____

Collector J. F. Rock _____

Locality Yon Chon Chon _____
(Sketch exact locality on back, if desirable.)

Habitat mountain ridge _____
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habitat _____
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers white _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date _____

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Dioscorea*

Local name *Kia* Dialect *Lam*

Field No. *163* S. P. I. No.

Collector *J. F. Rock*

Locality *ridges below*
(Sketch exact locality on back, if desirable.)

Habitat *grassy slopes*
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea *4500-5000* feet meters.

Habit *Tree*
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant *100 ft.* Diameter breast high

Flowers
(Odor, color, etc.)

Fruit
(Kind, odor, color, taste, etc.)

Special notes
(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Oct. 27/20

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name

Local name Dialect

Field No. 174 S. P. I. No.

Collector J. F. Rock

Locality Forest below

(Sketch exact locality on back, if desirable.)

Habitat Forest

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet meters.

Habit Tree

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date Oct. 27/28

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Smilax*

Local name _____ Dialect _____

Field No. 175 S. P. I. No. _____

Collector J. F. Rock

Locality Wapona, Lane Co., Oregon
(Sketch exact locality on back, if desirable.)

Habitat Jungle
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit Climbing over trees
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 17 1922

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 176 S. P. I. No. _____

Collector J. F. Rock

Locality Eastern Ch. p. slope

(Sketch exact locality on back, if desirable.)

Habitat Jungle

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit Woody climber

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct. 11/1933

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name Smilax

Local name _____ Dialect _____

Field No. 177 S. P. I. No. _____

Collector J. F. Rock

Locality Bar. Chuan Ching

(Sketch exact locality on back, if desirable.)

Habitat Jungle

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit vine

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct. 21/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 178 S. P. I. No. _____

Collector J. F. Rock

Locality Laos, Chien Chung

(Sketch exact locality on back, if desirable.)

Habitat grassy slopes

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4000 feet _____ meters.

Habit herb.

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers pale purple

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date _____

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 179 S. P. I. No. _____

Collector J. F. Rock

Locality Forest, Bolson
(Sketch exact locality on back, if desirable.)

Habitat Forest
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit small tree
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit red
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 21/20

Trunk.....

Crown.....

Bark.....

Sapwood.....

Heartwood.....

8-3216

BUREAU OF PLANT INDUSTRY
ECONOMIC COLLECTION.

Latin name..... *Hydnanthus*

Local name..... Dialect.....

Field No. 180 S. P. I. No.....

Collector..... J. F. Rock

Locality..... Gai Chuan Chang
(Sketch exact locality on back, if desirable.)

Habitat..... forest ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet..... meters.

Habit..... tree
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant..... Diameter breast high.....

Flowers.....
(Odor, color, etc.)

Fruit..... green, edible
(Kind, odor, color, taste, etc.)

Special notes.....
(Habit, abundance, associations, milky juice, etc.)

Uses.....

[OVER]

8-3216

Date

Oct 27/30

Trunk.....

Crown.....

Bark.....

Sapwood.....

Heartwood.....

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name.....

Local name..... Dialect.....

Field No. 181 S. P. I. No.

Collector J. F. Rock

Locality Gai' Chom Cheup

(Sketch exact locality on back, if desirable.)

Habitat open ridge

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5000 feet..... meters.

Habit herb

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant..... Diameter breast high.....

Flowers white

(Odor, color, etc.)

Fruit.....

(Kind, odor, color, taste, etc.)

Special notes.....

(Habit, abundance, associations, milky juice, etc.)

Uses.....

[OVER]

8-3216

Date

Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

S-3216

ECONOMIC COLLECTION.

Latin name *Polypodium*

Local name _____ Dialect _____

Field No. 182 S. P. I. No. _____

Collector J. F. Rock

Locality Hai Chom Chong
(Sketch exact locality on back, if desirable.)

Habitat Summit on tree, epiphyte.
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit fern epiphyte
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

S-3216

Date Oct 27/50

Trunk _____

 Crown _____

 Bark _____

 Sapwood _____

 Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY
 ECONOMIC COLLECTION.

Latin name _____
 Local name _____ Dialect _____
 Field No. 183 S. P. I. No. _____
 Collector J. F. Rock
 Locality San Thom. Chiriqui
 (Sketch exact locality on back, if desirable.)
 Habitat forested ridge
 (Character of soil or underlying rock, woods, or open country, etc.)
 Altitude above sea 4000 feet _____ meters.
 Habit small tree
 (Tree, shrub, herb, or woody or herbaceous vine.)
 Height of plant 20 ft. Diameter breast high _____
 Flowers _____
 (Odor, color, etc.)
 Fruit _____
 (Kind, odor, color, taste, etc.)
 Special notes _____
 (Habit, abundance, associations, milky juice, etc.)
 Uses _____

[OVER]

8-3216

Date

Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 184 S. P. I. No. _____

Collector J. F. Rock

Locality Slope of Mt. Thompson

(Sketch exact locality on back, if desirable.)

Habitat Forest

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4000 feet _____ meters.

Habit shrub

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 10 ft Diameter breast high _____

Flowers pale purple

(Odor, color, etc.)

Fruit blackish blue

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 21/40

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 185 S. P. I. No. _____

Collector J. F. Rock

Locality Laos, Chien-Cheng
(Sketch exact locality on back, if desirable.)

Habitat mountain ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit Tree
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 25 ft Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 27 1920

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 186 S. P. I. No. _____

Collector J. F. Rock

Locality For Glen Camp
(Sketch exact locality on back, if desirable.)

Habitat forest open
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit herbaceous
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 1 ft Diameter breast high _____

Flowers pinkish white
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 27/25

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

ECONOMIC COLLECTION.

Latin name Prunus
Local name _____ Dialect _____
Field No. 187 S. P. I. No. _____
Collector J. F. Rock
Locality forests below Loi
(Sketch exact locality on back, if desirable.)
Chom Chom
Habitat open ridges
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 3000 feet _____ meters.
Habit tree
(Tree, shrub, herb, or woody or herbaceous vine.)
Height of plant 8 ft. Diameter breast high _____
Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

Date Oct 27/20

[OVER]

8-3216

Date

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY
ECONOMIC COLLECTION.

Latin name *Quercus*

Local name *Me Kaw* Dialect *Lao*

Field No. *158* S. P. I. No. _____

Collector *J. F. Rock*

Locality *Wai Chom Chum*
(Sketch exact locality on back, if desirable.)

Habitat *forests ridges dry*
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea *4500* feet _____ meters.

Habit *Tree*
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant *40* Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 189 S. P. I. No. _____

Collector J. F. Rock

Locality Open rice fields on

(Sketch exact locality on back, if desirable.)

Habitat Mountain

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 3500 feet _____ meters.

Habit Shrub

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 3.5 Diameter breast high _____

Flowers pale pink

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name Cucurbit.

Local name _____ Dialect _____

Field No. 190 S. P. I. No. _____

Collector J. F. Rock

Locality Forest below Sri Chorn

(Sketch exact locality on back, if desirable.)

Habitat Forest

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 3500 feet _____ meters.

Habit Vine

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit Orange yellow

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Hygadium*

Local name _____ Dialect _____

Field No. *141* S. P. I. No. _____

Collector *J. F. Rock*

Locality *Forests, Bar Chom Chay*

(Sketch exact locality on back, if desirable.)

Habitat *forest*

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea *4000* feet _____ meters.

Habit *climbing fern*

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name Bursera

Local name Mo Kaw Dialect Lao

Field No. 192 S. P. I. No. _____

Collector G. F. Rock

Locality Forest below Sai

(Sketch exact locality on back, if desirable.)

Habitat Forest ridges

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4000 feet _____ meters.

Habit Tree

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 40 Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 27/40

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Phyllanthus*

Local name _____ Dialect _____

Field No. 173 S. P. I. No. _____

Collector J. F. Rock

Locality (Sketch exact locality on back, if desirable.)

Habitat (Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit (Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 30 ft Diameter breast high _____

Flowers (Odor, color, etc.)

Fruit (Kind, odor, color, taste, etc.)

Special notes (Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY.
ECONOMIC COLLECTION.

Latin name Fern

Local name _____ Dialect _____

Field No. 194 S. P. I. No. _____

Collector J. F. Rock

Locality Boi Chom Chong
(Sketch exact locality on back, if desirable)

Habitat Summit ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit epiphytic on tree
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Polypodium* _____

Local name _____ Dialect _____

Field No. 195 S. P. I. No. _____

Collector J. F. Rock _____

Locality Doi Chom Ching
(Sketch exact locality on back, if desirable.)

Habitat Summit ridge
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5570 feet _____ meters.

Habit Epiphytic on trees
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct. 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Vaccinium* _____

Local name _____ Dialect _____

Field No. 196 _____ S. P. I. No. _____

Collector J. F. Rock _____

Locality Shi Chom Chay _____
(Sketch exact locality on back, if desirable.)

Habitat Humid ridge _____
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit epiphytic _____
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers red _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct 27/22

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Ryugu* _____

Local name _____ Dialect _____

Field No. 197 S. P. I. No. _____

Collector J. F. Rock _____

Locality Forest, Sai _____

(Sketch exact locality on back, if desirable.)

Habitat Forest, Sai _____

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4000 feet _____ meters.

Habit Shrub _____

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 5 ft. Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct. 27/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Lept.* _____

Local name _____ Dialect _____

Field No. *198* S. P. I. No. _____

Collector *J. F. Rock* _____

Locality *Forest below Loi* _____
(Sketch exact locality on back, if desirable.)

Habitat *open forest* _____
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea *4000 ft.* feet _____ meters.

Habit *small tree or shrub* _____
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit *port reddish red black* _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date *Oct 27/30*

Trunk -----

Crown -----

Bark -----

Sapwood -----

Heartwood -----

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name -----

Local name ----- Dialect -----

Field No. 199 S. P. I. No. -----

Collector J. F. Rock -----

Locality Forest below Sai
(Sketch exact locality on back, if desirable.)
Chon, Camp

Habitat jungle
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet ----- meters.

Habit shrub
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant ----- Diameter breast high -----

Flowers -----
(Odor, color, etc.)

Fruit -----
(Kind, odor, color, taste, etc.)

Special notes -----
(Habit, abundance, associations, milky juice, etc.)

Uses -----

[OVER]

8-3216

Date Oct 27/22

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 200 S. P. I. No. _____

Collector J. F. Rock

Locality Forests below Poi

(Sketch exact locality on back, if desirable.)

Habitat Forest

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit Tree

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct 27/30

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 201 S. P. I. No. _____

Collector J. F. Rock

Locality Shi' Chom, China

(Sketch exact locality on back, if desirable.)

Habitat forested ridge

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4800 feet _____ meters.

Habit Tree

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 25 ft Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date

Oct 27/50

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Agave* _____

Local name _____ Dialect _____

Field No. *202* S. P. I. No. _____

Collector *J. F. Rock* _____

Locality *San Juan Chap.* _____
(Sketch exact locality on back, if desirable.)

Habitat *open ridge* _____
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea *5000* feet _____ meters.

Habit *herb. to shrubby* _____
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers *purple* _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date *Oct 27/30*

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY.
ECONOMIC COLLECTION.

Latin name *Commelina* _____

Local name _____ Dialect _____

Field No. 203 S. P. I. No: _____

Collector J. F. Rock _____

Locality forest below road
(Sketch exact locality on back, if desirable.)

Habitat forest shade
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4800 feet _____ meters.

Habit creeper
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers white
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 27/20

Trunk.....

Crown.....

Bark.....

Sapwood.....

Heartwood.....

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name *Comp.*.....

Local name *204*..... Dialect.....

Field No. *1, 7, 1000*..... S. P. I. No.

Collector *W. C. C. Chorn Ching*.....

Locality.....
(Sketch exact locality on back, if desirable.)

Habitat *mountain ridge*.....
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea *5500* feet..... meters.

Habit *herb.*.....
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant *50 ft*..... Diameter breast high.....

Flowers *yellowish*.....
(Odor, color, etc.)

Fruit.....
(Kind, odor, color, taste, etc.)

Special notes.....
(Habit, abundance, associations, milky juice, etc.)

Uses.....

[OVER]

8-3216

Date *Oct 21/20*.....

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 205 S. P. I. No. _____

Collector J. T. Rock

Locality Eden Chom Chom

(Sketch exact locality on back, if desirable.)

Habitat open forest

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 4500 feet _____ meters.

Habit herb

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 2 ft. Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Oct 24/20

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8—3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. _____ S. P. I. No. _____

Collector _____

Locality _____
(Sketch exact locality on back, if desirable.)

Habitat _____
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea _____ feet _____ meters.

Habit _____
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____
(Odor, color, etc.)

Fruit _____
(Kind, odor, color, taste, etc.)

Special notes _____
(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8—3216

Date _____

Trunk.....

Crown.....

Bark.....

Sapwood.....

Heartwood.....

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name.....

Local name..... Dialect.....

Field No. 207 S. P. I. No. 117

Collector H. C. Chen

Locality Hsiao Chuan Chang
(Sketch exact locality on back, if desirable.)

Habitat wet forest
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet..... meters.

Habit Tree, shrub, herb, or woody or herbaceous vine.

Height of plant 9 ft. Diameter breast high.....

Flowers.....
(Odor, color, etc.)

Fruit.....
(Kind, odor, color, taste, etc.)

Special notes.....
(Habit, abundance, associations, milky juice, etc.)

Uses.....

[OVER]

8-3216

Date Jul 9/41

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. 208 S. P. I. No. _____

Collector J. F. Rock

Locality Wai Chan, China

(Sketch exact locality on back, if desirable.)

Habitat Grassy slopes

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet _____ meters.

Habit _____

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant 10 feet Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date Nov 9/22

Trunk

Crown

Bark

Sapwood

Heartwood

S—3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name

Local name Dialect

Field No. 257 S. P. I. No. 17

Collector H. C. Gentry

Locality
(Sketch exact locality on back, if desirable.)

Habitat
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea feet meters.

Habit
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant Diameter breast high

Flowers
(Odor, color, etc.)

Fruit
(Kind, odor, color, taste, etc.)

Special notes
(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

S—3216

Date Nov. 9/50

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name

Local name Dialect

Field No. S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea feet meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. _____ S. P. I. No. _____

Collector _____

Locality _____

(Sketch exact locality on back, if desirable.)

Habitat _____

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea _____ feet _____ meters.

Habit _____

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date _____

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8-3216

BUREAU OF PLANT INDUSTRY.
ECONOMIC COLLECTION.

Latin name _____

Local name _____ Dialect _____

Field No. _____ S. P. I. No. _____

Collector _____

Locality _____
(Sketch exact locality on back, if desirable.)

Habitat _____

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea _____ feet _____ meters.

Habit _____

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant _____ Diameter breast high _____

Flowers _____

(Odor, color, etc.)

Fruit _____

(Kind, odor, color, taste, etc.)

Special notes _____

(Habit, abundance, associations, milky juice, etc.)

Uses _____

[OVER]

8-3216

Date _____

Trunk

Crown

Bark

Sapwood

Heartwood

8—3216

BUREAU OF PLANT INDUSTRY,
ECONOMIC COLLECTION.

Latin name

Local name Dialect

Field No. 213 S. P. I. No.

Collector J. T. Howell

Locality Griffiths Canyon
(Sketch exact locality on back, if desirable.)

Habitat
(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea 5500 feet meters.

Habit
(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant Diameter breast high

Flowers
(Odor, color, etc.)

Fruit
(Kind, odor, color, taste, etc.)

Special notes
(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8—3216

Date Nov 8/20

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Nov 3/20

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Nov 2/20

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

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Uses

[OVER]

8-3216

Date

Trunk

Crown

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Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

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(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Mar 9/25

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8-3216

Date

Trunk

Crown

Bark

Sapwood

Heartwood

8-3216

ECONOMIC COLLECTION.

Latin name

Castanea

Local name

Dialect

Field No.

227

S. P. I. No.

Collector

J. F. Rock

Locality

Bar Chom Chom

(Sketch exact locality on back, if desirable.)

Habitat

Tall tree ridge

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

4800 ft

feet

meters.

Habit

Tree

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

60-70 ft

Diameter breast high

2 ft

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

Cacao

[OVER]

8-3216

Date

Nov 4/1928

Trunk

Crown

Bark

Sapwood

Heartwood

8—3216

Latin name

Local name

Dialect

Field No.

S. P. I. No.

Collector

Locality

(Sketch exact locality on back, if desirable.)

Habitat

(Character of soil or underlying rock, woods, or open country, etc.)

Altitude above sea

feet

meters.

Habit

(Tree, shrub, herb, or woody or herbaceous vine.)

Height of plant

Diameter breast high

Flowers

(Odor, color, etc.)

Fruit

(Kind, odor, color, taste, etc.)

Special notes

(Habit, abundance, associations, milky juice, etc.)

Uses

[OVER]

8—3216

Date

Mar 8/29

Trunk _____

Crown _____

Bark _____

Sapwood _____

Heartwood _____

8—3216

Trunk -----

Crown -----

Bark -----

Sapwood -----

Heartwood -----

8—3216

AMERICAN OIL COMPANY

165 N. CANAL STREET • CHICAGO, ILLINOIS 60606

Table of
contents
Type when
filled in

all prepared, etc
X marked etc

10 10 10

Chungmai
left 2 p.m.

Chonkyang
house

* Camped Dec 2, 1940.
Tobala.

Took photos of the pagoda,
Talipot palm, village street,
and of a Kamuk, a native
from North Indo China,
French Lao State.

The legend states that
the Princes Rata and her
lover escaping from her
father left on horse back
over the red cliff at Pa
Wing Choo, their bodies were
recovered at Muang En, and
down below various articles
of the horses' equipment
at various rapids named
after the articles found,
Pa Morn (saddle found) etc.

(Photographed the red
cliff)

(Dec. 6, 1920.)

Tungcharange

Romeo C. H. D.

Ban Har

Pa Nos District up Dec. 10th

Camped Dec 10-11th.

Three Bushes
on hillside
shots

Ban Sam
pnom

The Wang

Nov. 4, 1920.

Descending to Hue me nai River.

The slopes are very steep, and the ridges pine-covered with also a few oaks and a Sheaceae "Daunk tselopi khai," Lao Name.

In the river bed there are many grasses, some 12 to 15 feet tall, Smilax, Rubus, Bamboo, and tall trees which I could not recognize. On both slopes of the valleys were to be seen many tall specimens of Livistona 80 feet or more in height. The fruits are large oblong lops of lazuli blue and shining, the rhaphe extending into the albumen is orange-red.

The palm is called Bha Kaw Keng and the fruit flesh is eaten after the seed has been boiled. Tree ferns are common on the grassy slopes under oaks and pines.

October 26, 1920.

Ascent of Mt. Doi Chom Sheing.

From the Mission Rest House, the immediate surroundings are Dipterocarpus, Mai Hieng, and lower down, Mai Tieng. The ridges are very dry, gravelly, and full of quartz. Grasses are very numerous especially the Chloris type with red tassels. A leguminous plant ascending but of vine-like habit is very numerous. Its leaves are very large and the flowers are pinkish, with it grow Melastomaceae plants, and Desmodium. The trees are Quercus in several varieties, the small spicate fruited one, fuzzy ones with the acorns inclosed in a fuzzy cup, also large oblong acorns with short cups. Higher up we find oaks with scaly cups completely enclosing the acorn. Castanopsis the small variety lower down and the large variety higher up. Leguminous vines are very common and a leguminous liana with apparently large pods is also common,

a leguminous tree with flat single seeded pods is common, and one with finer leaves and small semi-cylindrical pods standing erect on the upper surface of the branches, is found lower down. The forest while we still find large Dipterocarpus, Mai Yaing, gradually changes into a forest with large trees and much undergrowth belonging to various genera, Euphorbiaceae, Rutaceae, Evodia triphylla, etc, the main trees are evidently various species of Shorea and Hopea, much smilax with spines along streambed, near rice field we find Marantaceae, Plectocomia, Wallichia, Caryotaefolia, Musa, Pandanus furcatus, Hedychium, Zingiber, Costus, Pothosam trees, divided leaf like a Philodendron. From there the jungle reminds one very much of a temperate forest with Desmodium, and grassy lands with Pinus Khasia, and various oaks, also Castanopsis and Schima sp. The ascent is very steep and the view is glorious. Oaks and pines grow in company with a large Chloris type of a grass and also what looks like a Bromus (Hafer). In this grass we find a beautiful blue-flowered Desmodium and a smaller pinkish-blue species. Orchids are more common and tree ferns with short prostrate trunks have made their appearance. The ridges become very steep and narrow, and the ridge leading to the top of Chem Sheing is forested with pines very tall specimens, oaks and Theaceae, with very fragrant flowers. An Anaphalis and other smaller Compositae make their appearance in the tall grass, also Impatiens. Just below all this a large acorn, velvety brown with a large cup and a very small acorn, the smallest found are restricted below the pine ridges.

After a rather steep climb up a ridge, we have a glorious view over the mountain ranges, beyond there is a very deep valley; the upper slopes being forested with pines, oaks and Theaceae. The slope is very steep and in places precipitous; beyond is a wonderful forested region and Doi Intanon is visible in the distance, a four days journey. The very summit is wet, and the trees are entirely different. Oaks may still be found but a pinnate leaved tree with small Evodia-like capsules, a leatherly leaved tree with Tea-like flowers, Rubus, Polygonum, Desmodium, Vaccinium and on trees epiphytic or parasitic, is a red flowered woody plant. While orchids and Polypodiaceae cover the trees, Bamboo-like grasses, thorny Rubus etc. make up the jungle.

Today, the 5th of November, I took photos of the following; toward Muang Ha, Hue me pan, (name of stream where Pinanga palms grew.)

I descended once more into the ravine where I found several Livistona. The trunk was over 1 and one half feet in diameter, the inflorescence 6 feet long and consisted of three main branches, each dividing twice. The Pinanga palms were slender, about 15 feet in height and the stem 2 inches in diameter. In the ravine I took photos of the Pinanga with boy and Marantaceae in foreground, there were tall trees, one large persimon, green fruit, Calamus, Wallichia, Corthalsia; Dracaenas covered the ground. One lone Asplenium nidus was seen, one Marattia, and a peculiar fern, simple pinnate. Also a tree with reddish flowers in long terminal panicles. Livistona grew on the steep slopes.

Trip from Dai Chom Cheng to the River.

In the dense evergreen jungle trees covered with moss, Lichens, Hepaticae, and ferns, red(brick) flowering vines thick fleshy hard leaves, tall lianas, undergrowth, Zingiberaceae, Hedychium, Araceae, many Leguminosae as Mucuna, Desmodium, etc. Graminaceae, several species, Gleichenia only small plants, Lilium nepalense; Smilax, several species, Rubus, Polygonum, Commelina, Campanulaceae, Phaseolus, large pale flowers, Cyperaceae as Rhynchospora, Carex; Vaccinium is epiphytic as well as the red flowered Loranthaceae. The trees change after descending a 1000 feet or so. The trees are Castanopsis, the large fruited species, Quercus junghuhnii, Quercus sp? Mai Soon with red fruits, Pinus khasia grows on rocky narrow ridges covered with grass and odd Liliaceae. The forest is of a deciduous type.

From Dai Chom Cheng towards Dai Loo Tex, peculiar evergreen trees Mai Seing, Elaeocarpus, Schima, a scrubby looking tree with red seeds; the trees are festooned with ferns. Thunbergia, several species of grasses; Rubus, Smilax, Polygonum, a blue flowered Desmodium, and two other species; it is a real rain-forest with epiphytic Vaccinium, Mussaenda? red flowered Loranthus, Campanulaceae, Castanopsis, a leguminous shrub densely pubescent with seed pods erect on the upper surface of the branches; Melastoma, tall grasses, Quercus junghuhnii, Ma Kaw Luang, a few compositae, Pinus hirta? Labiatae. Lower down the ridges are grassy, and open, and the main trees are Quercus and Castanopsis, but lower still we merge again into the rainforest.

Dai Chom Cheng.

Description of the forest toward Dai Loctax from the Mission House down to streambed where water is obtained for the camp. The trees are all peculiar evergreens, one with large white flowers like Echima, Euphorbiaceae trees, a very large fruited Elaeocarpus, not Kerr's collection, undershrubs, Disporum pulum, composites, Smilax, photo-climbing, leguminous vines, Wicketroemia, Rubus, Urti-
ceae, Zingiberaceae, Impatiens, purple flowered very common, grasses, Polygonum, Thunbergia, Commelyna, three species, blue, white, and a branching inflorescence, Lianas.

We left Chiangmai December 2, 1920, at 2 p. m., Dr. McKean saying goodbye. After getting stuck several times on sandbars we spent the night at Ta Sala (Kam Kong). The sunset was beautiful, just a few clouds which turned pink were visible in the light blue sky, over Doi Looxex. We went down several fish weires which leave narrow passages with water rushing down as over rapids.

December 3. The night was very cold and the sky star lit the waning moon, still making it bright enough to presume it to be dawn or waking. The dew was very heavy and the mosquito net was ringing wet. Thick fog had settled over the riverbed, only the tips of the bambu piercing the fog. It was a real wintry morning. The birds were singing, also a few crows made the wintry scene more real by their weird cries.

At 9 a. m. I met Dr. Kerr, his wife and two children. We had a nice chat for an hour. They had come up the rapids, some of them with the help of ropes. In the distance I can see the Chun Tong range over the bow of the boat. The three gendarmes accompanying us are very nice. The crew at present consists of five men including the captain, all Lao people and heavily tattooed. The boat is 42 feet long, seven feet wide at the middle. The banks of the river are low only clusters of Bambu fringing the shores.

Went to the wat at Too noi where an old priest with a sore on his left foot presented himself. I put some calomel ointment on but he took it off in the morning. He said that puchow prayers he must offer and then he will be well; he is most ignorant. I

gave him a note to Dr. McKean and a ticket to go to Chiangmai. This is a small village full of mangy dogs, the banks are flat and Bombax insignis trees are commonly planted along the river.

November 4th.

The Captain has not yet shown up although it is 10 a. m.; the old crew has appeared but not the fresh crew which is delaying us. The people are filthy. Yesterday the priests took me up stairs on a bamboo ladder into the library of the temple. Many books of palm leaf written in Lao and Pali are wrapped up in cloth. The is very plain and three stupid looking Buddhas sit at the end of the nave. In the center is a chancel which looks like a shrine with ribbons hanging from the corners.

Left 10 a. m. from Tu noi, the crew got on on the other side of the river and we are on the way. It is still cool and somewhat foggy. At 3:30 p. m., left boat and took photo of Wat Doi Noi on top of the little hill. We crossed the river and I climbed to the top of Doi Noi, entered the pagoda where a white smiling Buddha sat enthroned. A wonderful view was obtained from the summit over the wooded plains, the Ma Phing winding through it, and in the distance the forested mountains, one of which was of very queer shape with an overhanging wall of immense height; it is known as the Chom tong range. The trees were of a deciduous type, Zizyphus 2 species, an Albizzia, a cotton-like species, may be Cossypium or Bombax. At 5:30 p. m. we stopped for the night at Talee.

At 7:30 a. m. we left midstream and rowed to Talee to pick up our men and then we started for Chom tong where we arrived at 10 a. m. I waded ashore, took one photo of the boat with our soldiers and another of the stream with the Chom tong range, with

Pai Hua Suar (Tiger's head) so named on account of its shape. There our soldiers left us and three new ones came on; they do not seem quite so nice as the other party. Fishing weirs are still in vogue. They block the stream, not leaving even a passage for the boat; they drive flexible Bamboo into the river bottom, the ends being on a level with the water, the bottom of the boat passing over them.

At Pai Loop Khan I stooped and climbed up the slopes and to the top of the hill. It is covered with dry jungle mostly cas-
salpinia and other leguminous trees besides Dyospiros, Vitex, etc. The evening was glorious, the Me Chom mountains range over 2000 feet in height, grew pink and then deep indigo blue as the sun disappeared. Many plants were seen in fruit or flower along the shore but we could not stop owing to the depth of the water, and the shallowness along the shore. We passed a sandbank where women dipped water out of holes in the sand. We went a little farther and then stopped for the night at Ban Peh (Goat village.)
December 6th.

The night was bitterly cold and I dreamed we had been attacked; the morning was less foggy than the one before, so we started early. We passed close by some mountains covered with trees, but bare in some places. It is said Buddha went over this hill with a fighting cock which scratched the surface of the hills to such an extent as to leave these bare places till this day. The top of the hills protrude above the fog. The sun appears and gradually the fog disappears and the river is just steaming a little. As I look back the Me Chom mountains are glorious to behold in the morning sunlight. The banks of the river are now flat and fringed by

trees and Bamboo; and is as winding as ever. The Mong Hot range is seen in the distance. At Scep Chem we are going to stop for collecting. The shore is quite flat but covered with jungle; here and there the ground has been cleared and rice fields are met with small bamboo houses. Enormous trees rear their crowns into the sky; the most common tree is a *Polyalthes*, it is a small tree with a dense but drooping crown. Ma ong Eok trees which I collected are also common. Ma Pop, a very large tree with broadly ovate leaves and large fruits which are spheroidal is the next numerous. The fruits covered the sandy ground. Bamboo, numerous vines, etc., form this jungle. We walked a few miles and joined our boat again at Ban Hang Dong (the tail of the forest.) The village consisted of a few houses; the women were weaving cotton cloth, others were cleaning the cotton and bleaching it.

After a splendid lunch we proceeded and now we are approaching the Muang Hot mountains and at present we are passing the gendarmery of Muang Hot, (2:45 p. m.). There we stopped to sell the rice which is mainly responsible for our boat touching ground so often. It is being sold to a distiller, 14 bags of it. I went to the village and photographed the wat, some of the flowering Talipot palms and the village street, the headman, ordering out all the inhabitants to stand before their houses. The priest of the fallen down wat refused to have their picture taken, but one was snapped unawares in front of the wat with huge Bhodi tree. I met three Karens who refused to have their picture taken, although I offered them money. They were a picturesque lot, like three peas in a pod, so alike were they with their striped jackets and ear-

rings and peculiar head-dresses. We went a little farther and then we stopped for the night. While still looking for a place of anchorage we saw several fires burning on shore and we took it to be jungle fire, but on nearing the spot we heard big bells jingling and all exclaimed "Chang", elephants. I was a Borneo Co. Elephants Camp. The next morning, December 7, 1920, being clear, we started early. The river was placid and mountains loomed up; we sighted a sharp peak with a wat "Dai King" on the top, two tall trees on each side of the wat, of which it is said that they have no shadow. The edifice being too sacred for shadow to fall upon. I went ashore and the Captain, Mon backo and I walked through teak forest and bamboo; there was very little to collect. We got out into the open rice fields and on the edge we found a few trees of interest; a Nezoneuron, an Albizia, Spondias sp?, with edible fruits, a Melia, etc. We were chased by a caribou for some distance and later we came on to some elephants and I said that now I had enough and I made for the waiting boat. The evening was glorious; we went along for quite a distance skirting the mountain with the wat so that we were exactly opposite for where we were this morning.

We stopped at another village, Hin tan, where the Captain bought some native illicit fire-water, but no chickens nor eggs could be had. We went a little farther, the mountains narrowed and the first rocks appeared, the cliffs were steep and trees were sparingly growing on the reddish rocks. We stopped at a sandbar called Xaw Palek where a little boy with arms as thin as kindling and a stomach as thick as a barrel met us. He was begging for rice. I gave him some satangs and bought 2 chickens for one tic from him;

we also gave him rice. He was at first scared of me but later when I walked with him he smiled.

This morning of December 8th, 1920 is very foggy. We passed a few rocks so called rapids, the forest on both sides of the bank are very peculiar; small trees of a dark green foliage and no underbrush. We are just passing through wonderful country, a peak forested and cloud capped.

At Um Pa I stopped to collect. It is a very steep hill but not very interesting; bamboo grows and higher up scrubby looking trees; on the steep rocks there grow some Begonias a couple of inches high and some blue-flowered Impatiens?. We went through mountainous country and finally stopped at a village called Um Pat, where we delivered some rice to a woman. I collected a few interesting plants; the hill to the right was very interesting. I found a number of trees in fruit, among them one large-podded Bauhinia. The country became more and more beautiful, the cliffs were very steep and red in color. Queer stalactite formations we passed and some of the rocks looked as honey-combed.

For the night we stopped opposite a big cliff, called "Por Mon". We had a wrestling match on a scaffold where they built a fire. It was a glorious evening.

On December 9th, before breakfast I climbed up into the sombre forest; there were many Crotons, and Euphorbiaceous undershrubs, some tall trees, a climbing Bauhinia with stems like a monkey's ladder. The woods became very dense and the walls of the mountain steep; it looked all very weird in the morning light; the stillness of this dense jungle with the red cliff wall opposite and above me, made me feel lonely and I returned to the boat. It was light

with arrows at the birds on shore and hitting pretty close. We saw a monkey on the right bank and Mr. De Lansa told me a story that Lao and Siamese roast or burn these long tailed monkeys to ashes which is then taken with liquor as a remedy for consumption, everything is used, hair and all.

To my left is a huge snow white sandbar and I can hear the roaring of another rapid ahead. The river is very wide and placid now but the surging waters ahead show its confinement to narrow banks. Black rocks lure to the right, the men row quicker and from the deep placid surface we splurge into the white foamy waters of the rapid called Tala luang. The water entered the boat and wet my baggage. There are several boats on the left bank and improvised shelters, women and children, etc; a regular dirty camp. Many deciduous trees clothe the hillside and give the whole scene an autumnal appearance.

To the left is a huge pyramidal rock, yellow and black in color; it is known as the giants fishing rod, Kan bet. The giants name is Ai tai luk (look). he was fishing in the deep pool beneath, but the fish got away to the Kaw village and he sent his cat there to fetch it, the cat however got stuck on the way, on the hill; we saw an imaginary cat way up on the red cliff this morning. We stopped at the foot of the big rock and took two photos one of the rock, the other, down river and also of the boat. One of our men nearly naked was looking for birds with his bow and stone and I photographed him standing and showing his tatooing. Off we went again down the gorge although it is 5 p. m. We are now stopping at a beautiful spot; a red stone cliff on the opposite shore with

a gentle green slope to its base. Farther up the stream is a Kanni camp with elephants, on the side where we are stopping is a wat on the top of a hill. The place is called Pa Khar.

December 10th.

Early this morning I rose and climbed up the hill next to the boat. During the night the elephants broke Bamboo for food and it all sounded like machine gun fire. I had hardly started up the hill when the elephants came down to bathe. On the trail up I saw bear tracks and fresh bear dung. However, I climbed over the rocks which thousands of years ago the river had surged over. The whole hillside is one solid mass of gray rock and all water-worn. The rocks look exactly like those found in the riverbed, deep smooth holes formed by water whirls. In these holes trees are now growing, and on the rough surfaces Euphorbias with candelabra-like branches find a foot-hold. In all this dry rocky region a beautiful blue morning-glory blossomed in the cool morning air, while fleshy yellow-flowered Crassulaceae grew among the rocks. We heard gruntings and queer noises and soon found them to emanate from a wild bear and being unarmed we gave him the field and returned to our boat. It was a glorious morning; I took pictures of two elephants and of others in the river pushing logs, one was a vicious one who tried to dislodge his rider from his neck but was unsuccessful. We started down the river accompanied by elephants for quite a distance. We went over several rapids, many logs were in our way and on one island hundreds of logs were piled up. We reached the entrance, or in our case, the exit of the rapids at 11 a. m. There is a huge rock to the right with one cave of three

(B) Rock J. F.
Siam Burma Assam
1920-21

Needs repair, glue on
Verop

239-952
1500-1527

exits, each one pointing to a different direction of the compass, one turned toward Chiangmai, one to Burma and one toward Bangkok. The sandbar where I dried my blotters is known as Kaw Paw luang, while the rock is called Doi Dung cha.

We just left the Borneo Co. compound at Ban nar and now we are passing along the village proper along the river with numerous coconut palms. There are still mountains before us while Doi Dung cha is still master of the scenery. Little lower down the river broadens and the banks are low but covered with forest. I spied a yellow bignoniaceous tree; we stopped and the Captain climbed the tree and secured flowering and fruiting material, also collected a vine with peculiar pods, the lone seed being at the apex. As we cast off I jumped into the water as we got hopelessly stuck. So I swam quite a distance in the middle of the stream ahead of the boat. While still in the gorge way back at about 2 p. m. I climbed over steep rocks on to an interesting looking hill covered with stunted trees. It is known as Pa Hu, but it was tall and the seeds were like needles; I suffered excruciatingly, the seeds penetrating by the thousand through the innermost garments (there was only one shirt), every movement causing pain like the stings of thousands needles. After a hasty retreat I changed all my clothes.

A little after 5 p. m. we stopped at (Kaw) Sam Gnow, (Kaw meaning sandbar) and Sam Gnow, three shadows. There is an altar on the hillside with three buddahs in niches on the hillside. There is supposed to have appeared a strange vision and to commemorate the same devout Buddhist erected this altar.

December 11, 1920.

This morning I crossed over to the altar and took three photos of the buddhas, one from the stream quite a distance away showing the hills with clouds in the background. The river is now very wide and we are passing a village called Ban San Onow at 8:30 a. m.

All day we glided over the placid river which is now very wide. We were stuck on sandbars continually all day long. At one village we stopped where the Captain had relatives and then again we stopped a little beyond for firewood. There we collected plants also. For the night we stopped at a huge sandbar. The natives built a fire and Mr. De Louza told them about America. They knew very little about it and did not know that there were conveyances between Bangkok and America. One asked after being told that it took two months from here to America, if one could walk it in that time. They were also lectured on astronomy. They did not know that the earth was round and that it moved. Another asked if Germany was very near to America. None of them knew or had any idea what an ocean looked like and that Bangkok was very close to the sea.

December 12. Sunday.

I got up early and began packing. After a two-hours' rowing, we landed at the Borneo Co. in Raheng at about 10 a. m. We delivered the cash and landed all our belongings; we are now housed at the Borneo Co. rest-house. Mr. De Louza and I went down on the boat as far as the wat of Raheng and which was an old tumbled-down affair. We asked for the Governor but he is in Bangkok at present. He had been absent since the 4th, so we went to the man in charge of affairs who greeted us in black Chinese trousers.

He gave us very weak luke-warm coffee and told us that he had a pany for myself and twelve cooly carriers, but as we did not arrive in Raheng on the 9th as announced, he sent them away again, but would have them at the Borneo Co. on the morning of the 14th . We then went through the dirty dog infested street to the Borneo Co. bungalow; everyone staring at me and even the dogs barking at this strange pale creature. On the way we called on Mr. Gaerdner of the B. B. C. who invited us to dinner at 5 p. m.

Latitude of Chiengmai about $18\frac{50}{60}^{\circ} =$
18degrees 50'
" " Raheng " 16 " 55'

between longitude of 78 degrees 30' and 77 degrees 30'.

We left Dec. 2, Chiengmai at 2 p. m. arrived at Raheng.

Hue me nai River to Assam 11/09/1920 -
02/20/1921

Journal
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Iron, trim edges?
Xerox

Raheng - Bombay Burma bungalow, night of the 15th. Ban Chang tai is the village where the elephant died. We passed Doi Sary, lunched, left at 3:50 and spent 2nd night at 5 p. m. at Pang ma Kham pom under the big trees where I took photo of bed, coolies, and trees. 26 Kilm. Climbed next day to hill where I collected orange tree. Lunched at the top of the hill where I collected seed, went to Palut, slept in Lala 3rd night. From there we left at 8 a. m., through dry teak jungle, Strychnos trees, Dipterocarpus Mai Liang, passed through big tree grove where I took pictures and collected seeding bamboo. Flat country with bamboo jungle, crossed stream Me la mong (Burmese) Mela moo (Lao name) at 1 p. m. went to wat and went up the hill where we stopped the little village below called San Par pin. We dried blotters etc., heavy dew and fog. Left next day, climbing hill; photographed the deep gap and Mt. Doi Pa Waw (ragged hills). Stopped at Nam dip at the foot of a big tree where I collected butterflies for lunch. Left at 2 p. m., climbed a small hill and went on to Pang luang. Before passing Chinese pagoda at the foot of Pa waw, took picture of huge bamboo. Stopped for the night at Pang luang, where I had a swim in deep pool, slept beneath huge Dipterocarpus, Maiyang trees. Next day left at 8 a. m., arrived at Mesawt at noon on the 20th. Saw Amphur and got rest house coolies in chairs in office. Left next day with bullock carts, 8 a. m., crossed the Myawaddi, the Lao name of the river is Me Moe (Misty river) at Myawaddi passport was examined. Stopped for lunch at Bungalow on 21st. Slept that night at Thingannyinong or (Pang Sang Kang) Lao name. Met Mr. Huntley. Taraktogenos Kurzii grows at that village in the forest.

Burmese Dr's name Ko Mong gyi. Stopped for lunch at Lukli bungalow, climbing up the big hill where I took photos of Siamese hills lookin back. At Lukli bungalow, loaded camer and took photos over the hills to Kawkareit. Slept at misty hollow, 22nd. On the 23rd I left for Kawkareit, taking pictures of the hills, arrived at lower bungalow.

TRIP FROM RANGOON TO MYONHOUNG.

After leaving Rangoon the train passes through paddy fields, and latter paddy fields are Borassus palms, Bombax etc. A long range of hills known as the lower Shans stretch in a northerly direction toward Mandalay. I arrived at Myonhoun at 6:10 in the morning which was fairly cool. The air was full of dust which made the whole atmosphere very hazy. At 7:35 I took a local train for Aungmyetharaya Shore on the Irrawaddy. The opposite shore is lined with barren hills which are full of pagodas and monasteries. The white pagodas are all over the landscape. The river is very low, just now only 6 to 7 feet deep in places.

I ferried across to Sagaing where I had an hour's wait for the train. Sagaing is a dirty dusty hole; I went forth in a rickety old garry enshrouded in volumes of dust, past old shops, saw-mills liquor shops and vendors of all sorts and colors. The Burmese are of course much more in evidence here than in Rangoon.

From Sagaing the train enters desert country which during the rain is inundated. Dust everywhere and in the distance pink barren hills with smoke rising from overburned black areas.

The vegetation is mainly Euphorbia antiquorum, E. tirucalli (a hedge plant) and various desert plants with sharp spines, bushes of Zizyphus, Bombax and Borassus. Dust is everywhere in evidence. We pass a pond or large pool with thousands of Borassus palms on the shores and soon we near Monywa.

The station at Monywa is enshrouded in dust. Two bullock carts convey myself and baggage to the Shyllong on the Chindwin River. After greeting the Captain I went ashore again, going

through the Bazars with all its flies and filth, Burmese women squatting on the ground among fighting dogs and smashed rotten tomatoes; calliflowers, tomatoes, jujubes, cucurbits and beans, Chinese cabbage etc. from the green groceries. Curry powder, and all sorts of condiments from the dry groceries, brown cake, sugar black with flies; all this I could not stand so I turned back and walked towards a pungyi school where there were many talipot palms in fruit. I collected seed giving children a few pice for helping me pick them.

The banks of the Chindwin are flat on the right hand but hilly on the left, with palms and pagodas; the slopes down the river are steep.

After a comfortable night in a clean bed we left at six in the morning only to stop after a short run to pick up passengers who were waiting on the steep banks under huge Samanea trees. The colors of the Burmese are wonderful and picturesque against the gray background of the muddy banks of the Chindwin, deep purple, pink, light blue, dark grey, all forming a beautiful color scheme. We are just passing a village on the right bank, a huge tree covered with bright yellow vine long drooping, gives it a peculiar willow-like appearance. Cocoanuts and large trees fringe the upper shore, and peculiar house boats very large and somewhat resembling Chinese Djunk, are anchored along the shore. The river is fairly wide and stakes placed in a slanting position show the channel for the boat which at present is on the left; flat mud banks extending for some distance to a palm-fringed bank washed by the waters of the Chindwin in the rainy season, which is fifty feet higher than now.

January 15, 1921.

We made very little progress yesterday. Fog covered the river so we did not start till late. Shortly after we had started we became stuck on a sandbar and there we remained for hours. All the third class passengers were taken ashore to lighten the boat and finally we got afloat again; the whistle blew and the passengers were taken on board again by rowboat. It was then about 5 P. M. We proceeded for an hour and a half in the dark with only faint moonlight, till we landed at a place called Mawkadaw. At mawkadaw I was informed by a nice Burmese chap that about 20 miles from the village at Chingyon Chndon, district of Kyongyi, in the Hkaungden forest, Kalaw grow plentifully.

In fact he said Kalaw formed the forest and there were hardly any other trees except Kalaw. His name is Maung Ka. The Captain and I went ashore and walked through the dark village. We passed Maung Ka's house and he gave me some old Kalaw seeds. Dogs barked at us, the moon went behind the trees, and we returned to the boat.

January 16. Bright and early this morning we left Mawkadaw. The night was cold and it seems the morning it still colder. As I look out of my cabin windows and look down the river, it is hazy and somewhat foggy, like a November morning in Europe. The river is placid and wide, large trees fringe the banks, and no hills are discernable as clouds or fog is back of the forests of the plain. The sky is of a pale blue like a real northern sky; houses are visible with a few Palmyra palms and even coconut palms, but they do not look healthy. The grey wall of sand

along the bank is about 60 ft. high, only at the foot of it is shrubbery in patches, I suppose Homenoya riparia. As the sun rises, the fog seems to become more dense, and the atmosphere cooler. Fog rises from the surface of the water like it did on the Me Ping in Siam. We seem to be getting into denser fog for I can't see ahead. The fog is now very dense in places but it is clear in others. Trees with bare roots, the soil having been washed from under them, hang on for dear life. The bank seems to be of a gray sandstone with the strata sloping against the river. We are in the midst of a fog bank and it is cold and dreary, the fog on the surface of the water stands erect in little columns like dancing fairies. Still dense fog, and we have slowed down. Two boys singing out in high voice the depth of the water every half a minute alternating, one sings "Eile pare pep", the other "Are e peep," and "e pate e paap." Still fog but less dense. Two huge house boats about 45 feet high at the stern with a little bridge and a roof, one mast in front, the bow forked and painted yellow, a long bamboo cabin in the center, are lying off to our right and are quickly lost in the fog.

Beautiful sunshine, a cold brisk atmosphere, a pale blue northern sky, a placid river, low banks, flat and grey on the right, steep wooded hills to the left, here and there a lofty palmyra palm, a Saliput palm in fruit, a coconut grove denoting a village, trees of various green, red, yellow and brown, with white pagodas on the slopes of the hillsides; such is the picture which my eyes behold at present and which forced this pencil to put to paper. A glorious morning in this northern clime, where,

although years removed from such atmosphere I still feel at home. The autumn tints of deep red, bare trees with ghost-like branches casting shadows onto the placid waters of the Chindwin, a raft floating down the river with people rowing on the four corners, a house in the center with a flagstaff which is a still-leaving tree with a red and white flag tied to it, then again, another conveyance of layers of bamboo, one end of one lying on top of the other and held together by ratan, manned by a single Burman; is the scenery passing before my eyes. Steep wooded hills to the right, and in the riverbank there is a cove with a flat plateau with temporary houses which have been constructed, for in flood times the river will have covered all; old gray pagodas form the immediate background, with betel nut palms, Coccoloba, coconuts and Palmyra palms. Now we stop to take on a few passengers on the right bank, a woman with a bundle on her head carried by a pile of wood and covered with a rich crimson cloth; her husband walking behind her empty headed with white turban and a square checked pinkish or brick-red cloth, white shirt, long black glossy hair tied into a knot and folded down the neck. No breeze is stirring, not a leaf moving, all is quiet and peaceful; it is even hot now as the boat has stopped. The river is much narrower and a sharp bend is ahead.

I stopped at Kalawa for the night. The Captain and I went ashore and after passing an old pagoda with a few flowering-fruited Talipot palms, we made for the famous Chin hill-road. The road, rather narrow, passes through a small village and leads around the foot of the rocky hills covered with teak, and along

the Myittha River a tributary of the Chindwin. I collected plants along the trail. The forest is very dry and dreary. The road leads to Fort White about 60 miles distant and garrisoned by Sepays. The headquarters are at Fallan, the highest point in the hills is at Fort White, about 9000 to 10000 feet elevation, looking down into Nayar and other unadministered territory. (Took photo of pagoda and palms at Kalewa.)

On this morning of January 17, we started early but did not proceed far as fog came over the river and delayed us till 9:30 A.M. The morning is glorious and crisp, the hills are clear, the atmosphere pure, the mountains are sparingly wooded, exposing large patches of rock now covered with dead dry grass. A deep red-purple, the autumnal garment of many trees give the hillside a varied-colored appearance. We stopped at Massein, a village with a dark bungalow at right side of the river, (going up). Women as usually loaded firewood for our steamer's consumption. I went ashore and took two photos and one from the boat. A little distance away is a small hill with numerous pagodas and a covered stairway leading to the top. To the left there is a defile where the water forms huge whirlpools in the rainy season, (July). A little pagoda crowns the rather sharp rock wall. We are now passing along the foot of a peculiar mountain range with short peaks interruptedly wooded.

Chindwin River

At 7 a. m., January 19, I left Mawlaik by bullock-cart to the headman of the village, where a canoe, a dugout, awaited me. We rowed for about an hour on the placid river enshrouded in fog, but shortly before we arrived at the Kodan River, the fog lifted and we found the headman of Kyaing, the village where we disembarked, on his way to Mawlaik. We called him and showed him my magic paper from Mr. Nicholas and it worked its charm; he returned immediately with us to the village, took us to his dirty house. He himself was very clean in a pongee jacket, pink head-dress and long black hair. He was gentleness personified. They spread mats and a carpet, brought three chairs, one straight back and two lounging chairs, and would have brought more had I not remonstrated. They offered betel nut and cigars, of which my interpreter partook. Coolies were obtained instantly and soon we were on our way to Nansouksouk; Kyain is a long village on the left bank of the Chindwin (going down) Young Dwin. Nansouksouk is a village of eight houses and coolies were not available so I ordered a bullock-cart and one cooly. We bought two chickens at four annas each, or about 6 cents, and eggs at 1½ cents a piece. We had lunch there and proceeded over paddy fields and jungles to the banks of the Kodan River which we crossed. I met an old half blind Burman, a kind old man, who pleaded with me to help him. He was suffering from cataract in both eyes which were however not mature. A little boy led him, he was 78 years old. My carrier was still worse off as he had syphilitic eyes which he acquired by bearing a turban which belonged to a syphilitic.

and as they use it as a towel as well as a headgear, it is no wonder that he contracted the disease.

The country is flat but hills are not distant and tomorrow we shall cross them.

On arriving at Theung Dwin, we found everything in order, the people awaiting my arrival. The Seyath was cleaned, and curtains were hung all around it, mattings spread and I was made generally welcome. Coconuts were brought, women carried jars and jars of water and wood for cooking. In fact women were most of my coolies, some with babies on their sides and backs, but carrying my botanical bundles on their heads, over hot paddy fields.

I walked through the village which consists of one hundred houses. There are many dogs but they are not vicious. On passing groups of men, they all squat down and salute. When talking to them they lift up their hands as in prayer; it is to me very uncomfortable. The children usually ran away, but their parents appreciate kindness shown them. They continued bringing water, and now all is at peace.

The little boys went to prayer and chattered next door in the pyungi Ryount. The night was cold and foggy, and now after breakfast it is still foggy, and we are about ready to go.

With 19 coolies I started out this fine beautiful jungle with mighty trees, some teak. We crossed the Kodan River five times and finally reached Khoung Eyew at 1 p.m., At a village just before the first crossing I engaged a horse but it was terribly wild and evidently had not been broken, or only a very

short time ago, it kicked too much to suit me. So I footed it across the stream walking barefooted through the forest. The soil was very sandy. I was told that wild elephants were a plenty and they often come to the stream to bathe. The scenery was beautiful, very rich and tropical, notwithstanding the high latitude. Several species of Terminalia, some with winged fruits, others with fleshy fruits; Congea was plentiful and also a white-cream colored bracteate vine but not Mussaenda. The flowers are arranged densely on little spikes. The boys were all very good natured, they got 10 annas apiece for carrying my trunks 8 miles through streams and jungle. After lunch I went with the headman of the village and two boys into the jungle looking for Kalaw. We found lots of fruits on the tree but no ripe ones. We picked up seeds which were apparently from freshly fallen fruits. They were O. K. I packed them immediately on arrival in camp, which is a bamboo floored Segath near the Pungi house. The little boys just finished praying next door and everything is quiet, only the crickets are chirping. Tomorrow I am going on the other side to search for Kalaw again.

Photographs taken were: large tree photographed (near Khoung, Khoung Kyew.) in forest Thadunphire, Forest showing roots exposed equals Kanyinbya, which is Dipterocarpus alatus, also boy near tree trunk. Strychnos nux vomica, Quercus sp., Ficus sp. The Quercus sp. resembling Q. Junghuhnii. Ghoung Segat. Mangifera caloneura. Photographed Kalaw tree, tree in foreground Quercus sp. Ficus sp., strangling fig. The Bamboo photographed is Cephalostachyum pergracile or Tin wa. Also see Wallichia disticha.

January 21, 1921.

Today I went into the Eastern jungle called Thodunphue, with four men. We crossed the Khodan River twice. I took photos of the second crossing and one up stream with bay in foreground on my way back. We entered the jungle of big trees, Dipterocarpus alatus, Quercus sp., Strychnos nux vomica, and gradually passed into dense Bamboo jungle, composed mainly of Cephalostachium pergracile, the Bamboo jungle gave way to dense forest. The undergrowth was mainly ferns (see collection). Wallichia caryotoides, and species of Ficus near the entrance; after that mainly Kalaw forest. I took two photos of Bamboo jungle. We climbed up a steep slope entirely covered with Kalaw trees, some were in fruit. I took photo of fruits pinned to trunk (2 expos.), also group pictures of Kalaw. One photo of Kalaw tree in deep stream bed with Quercus Junghuhnii in foreground. Calamus climbers are common, Pteris ferns, Pandanus with slender leaves and long thin stems. I took several photos of small stream beds to show the situation in which Kalaw grows best.

The headman of the village told me that in July they dare not to come into this forest as the fruits are then ripe and have dropped. Bears are exceedingly fond of the fruits and pigs eat the seeds. At the Kalaw fruiting season they will not eat pigs on account of fear of poisoning. They will never eat fish from the Khodan River as the fish eat the Kalaw seeds. In the rainy season, the now dry stream beds, are full of rushing water which carry the fruits into the stream. Thus with bears, pigs, monkeys and floods, 50 per cent of the fruits are lost. He also

said that they collect the fruits only every three years, which length of time it takes for the fruits to mature. The seeds evidently keep their germinating power for some months as those found on the ground were perfectly fresh although they had been there since September. They remain there until the commencement of the rainy season, and of March or April, and then germinate. The steep ridges are full of Kalaw trees, showing that good drainage is absolutely imperative. Bambu grows with it, and so does Wallichia disticha.

Coolies will not enter this forest in threes or fours, but 15 to 20 will only penetrate on account of numerous wild elephants which roam through these woods. Adhatoda vesica is common as underbrush, especially in the stream beds as is also Phlogacanthus pubinervius which equals Mauk Salum. The flowers are red and smaller than those found in similar locations in Siam which is evidently also a Phlogacanthus.

We arrived at Kyokta about 11 A. M. and after speaking to the headman I arranged to go immediately into the Kalaw forest. We followed a dry stream bed which looked very picturesque lined with huge trees and these in turn were covered with vines. We followed the white winding sandy bed for quite awhile and I was just about to take a photo of a Kalaw tree when it began to rain. I left the camera and Maung Gale under the tree and with eight men I followed up into the hills. We were not very successful in regard to fresh fruits. There were numerous trees loaded with young fruit but no ripe ones. After collecting a few seeds I went back to the village.

On the next morning I started out again with the camera and then I took a few photos, one of the outlet of the creek, tiger foot prints in the sand, and a few of the dense jungle. In the afternoon I went to the stream bed and took photos up the stream and on returning I photographed the ~~nonprimitive~~ teak tree.

At the pungyi gyan I photographed the very primitive padogas made of bamboo and sand, the hti was of wood and crowned by an empty soda-water bottle.

In the evening all the men came back with their Kalaw seeds which they had collected in the various parts of the hills. They related that they had met a bear and took away its young which they presented to me. It cried very much.

enough for me to take a photo of the cliff and another (2) of the boat. He had breakfast and left this deep gorge. All day today we passed through deep gorges and negotiated rapid after rapid. The first large one was Keng soi; the second large one was Om lu; it made two wide curves which made navigating very difficult. A little below that rapid we stopped. The natives went to buy rotten fish from natives who were fishing in the rapids. I took two photos, one down and one up the rapids, including the fishermen. We stopped again at a place where I saw huge Dracaenas growing on cliffs with a species of Eupherbia with cactus-like branches. We passed a steep overhanging wall with large bunches of maiden-hair ferns hanging from the walls. It is known as the princes bathing pool. We went through many more rapids and finally after leaving the deepest gorge Hsun Kiang, I stopped and took two photos of the deep gorge but we were too far away. At Ok Ma we met with difficulties. The boat was let over the rapids with ropes, but the wood to which the rope was fastened gave way and if the natives had not dragged the boat to the bank, we would have shot straight against a rock. Finally we were let over the rapid, I taking pictures of the natives holding on to the ropes. Since then we passed two more long straight rapids and now we are again in a deep gorge. Tall trees are fringing the bank of the Phing, to the left the hills are steep and covered with forest, huge rocks skirt the right bank, with occasional teak logs balancing on top of them. The river winds and winds. It is perfectly lovely now, quiet and peaceful, the smoke from our fire and the splashing of the oars only are discernable. No life is seen except occasional birds, black and white, flying over the waters. The boys are shooting

Feb. 20, 1921.

ASSAM.

Trip into Dibru Forest Reserve.

Dr. Muir and I, in company with two forest rangers and Coolies crossed the Dibru River in a dugout and went to the forest reserve following a trail which leads through the reserve nine miles distant to the banks of the Brahmaputra. The reserve is situated between about 95 degrees and 15 minutes, and 95 degrees and 31 minutes longitude, and 27 degrees and 36 minutes and 27 degrees and 42 minutes latitude. It is marked as the 8th Dibru Reserve in the Dibrugarh Range. The whole of 8 reserves belong to the Lakhimpur district.

There are very tall trees such as Artocarpus, a valuable timber tree which seeds in August, Dillenia indica, Cinamonum, Pterospermum acerifolium, Myristica, Ficus sp., Ficus elastica, Shorea, Elaeocarpus, Calamus sp., Aroids, Plectocomia, Pinangas, etc. Gynocardia odorata, which was in fruit is rare. I photographed a trunk with fruits pinned against the tree.

A little way in the forest we stumbled upon a peculiar lot of people belonging to the Mishmi tribe. They are of Mongolian type, and the men are sturdy and well built, but small and frightfully dirty; their hair is long and stiff with dirt; they are brown and flat nosed with high cheekbones. Their ear lobes are perforated and in them they wear a bamboo ring with another ring made of common wire. They wore only a coat and a small sham apron, but over their shoulder they wear a bag made of monkey or bear hide, hair outside, and in addition they have a knife in a one-walled sheath, the other side consisting of wire. We

asked them to accompany us after I had taken four pictures of them, two group pictures, the other two of a man and a woman. The latter was decorated with silver rings of various sizes which she wore around the neck and breast; she was a little shy and did not wish to lay off the blanket which she had over her shoulder. Six of these children, like wild people, came with us, and truly they climbed the Taraktogenos and Gynocardia trees like monkeys, smoking a pipe while they climbed the trees, and jumping from tree branch to tree branch like monkeys.

On the left side of the forest there were quite a number of Taraktogenos Kurzii trees; some very large, 50 to 60 feet in height. I photographed fruits pinned against a tree trunk, also a large tree, and a tree trunk with a Mishmi standing by the trunk. I photographed one Mishmi next to a Ficus trunk and another I photographed of the Taraktogenos forest with a Mishmi on the trail. The trees of Taraktogenos Kurzii are very much larger here than in the Chindwin region in Burma. The fruits are darker brown but become lighter when old. There is no doubt of it being the true Taraktogenos Kurzii. The fruits of the latter are borne on the ends of the branches and those of Gynocardia odorata are borne on the trunk and on the old wood of the branches; they are in other words cauline. The soil is different here, instead of being sandy it is of a loamy-clayey nature. The trees do not grow on hill slopes but on the flats in dense forest jungle; they do not form pure stands as in Kyokta and Khoung Ryan, Burma, but grow scattered or here-and-there a group together. The fruits of Gynocardia are globose, depressed at the apex and pinkish green

and rough, and lenticellate as is the bark of the trunk and branches. The fruit flesh of the latter is hard, almost woody when immature, and the seeds are less numerous, some of the ovules being abortive, the seed coating appears blackish in the fruit.

The following trees are found in the Dibru forests:

Terminalia myriocarpa, Artocarpus chaplasha, Gmelina arborea,
Cinnamomum cecicodaphne, Morus laevigata, Lagerstroemia speciosa,
Mesua ferrea, Bombax malabaricum, Canarium bengalense, Premna
bengalensis, Myristica assamica, Ficus elastica, Ficus sp.,
Kydia calycina, Macaranga indica, Heteropanax fragrans, Bras-
saiopsis sp., Stereospermum chelonoides, Sterculia villosa,
Eugenia praecox, Saccharum arundinaceum is the most common grass.
Also Pinanga gracilis, Calamus tenuis very common, Terminalia
bellerica, T. chebulia, T. foetidissima.

Took the following photos in Bherjan forest reserve:
two of Assamese people, two Kako Bamboo, one of tree of Gynocardia
odorata, 2 of fruits on trunk, 2 of tea plantation.

Trees in reserve, Vatica seedlings, Vatica lanceafolia,
Bombax malabarica, Kako Bamboo, Cedrela Toona, Gynocardia odorata
Dipterocarpus Mamii, D. pilosus Shorea robusta, Artocarpus chap-
lasha, Terminalia myriocarpa, Ficus sp., Macaranga, Pterospermum
Stereospermum chelonoides.

Iron out wrinkles
Krylon
Each sheet cut in 2 parts for
mounting.

As checked by Rock.

SMITHSONIAN INSTITUTION

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1920-1921

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0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959
10	60	110	160	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960
11	61	111	161	211	261	311	361	411	461	511	561	611	661	711	761	811	861	911	961
12	62	112	162	212	262	312	362	412	462	512	562	612	662	712	762	812	862	912	962
13	63	113	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913	963
14	64	114	164	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964
15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969
20	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
26	76	126	176	226	276	326	376	426	476	526	576	626	676	726	776	826	876	926	976
27	77	127	177	227	277	327	377	427	477	527	577	627	677	727	777	827	877	927	977
28	78	128	178	228	278	328	378	428	478	528	578	628	678	728	778	828	878	928	978
29	79	129	179	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979
30	80	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980
31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981
32	82	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	932	982
33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984
35	85	135	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985
36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
38	88	138	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988
39	89	139	189	239	289	339	389	439	489	539	589	639	689	739	789	839	889	939	989
40	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990
41	91	141	191	241	291	341	391	441	491	541	591	641	691	741	791	841	891	941	991
42	92	142	192	242	292	342	392	442	492	542	592	642	692	742	792	842	892	942	992
43	93	143	193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943	993
44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994
45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999

151a
3700

As checked by Rock

SMITHSONIAN INSTITUTION

UNITED STATES NATIONAL MUSEUM

Collection of

Rock etc

Package No. *13053*

100	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
1	51	101	151	201	251	301	351	401	451	501	551	601	651	701	751	801	851	901	951
2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959
10	60	110	160	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960
11	61	111	161	211	261	311	361	411	461	511	561	611	661	711	761	811	861	911	961
12	62	112	162	212	262	312	362	412	462	512	562	612	662	712	762	812	862	912	962
13	63	113	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913	963
14	64	114	164	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964
15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969
20	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
26	76	126	176	226	276	326	376	426	476	526	576	626	676	726	776	826	876	926	976
27	77	127	177	227	277	327	377	427	477	527	577	627	677	727	777	827	877	927	977
28	78	128	178	228	278	328	378	428	478	528	578	628	678	728	778	828	878	928	978
29	79	129	179	229	279	329	379	429	479	529	579	629	679	729	779	829	879	929	979
30	80	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980
31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981
32	82	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	932	982
33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984
35	85	135	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985
36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
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42	92	142	192	242	292	342	392	442	492	542	592	642	692	742	792	842	892	942	992
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44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994
45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999

6+

etc

W32 10-990

Package No. 13053

0	50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
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2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959
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13	63	113	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913	963
14	64	114	164	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964
15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969
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21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
26	76	126	176	226	276	326	376	426	476	526	576	626	676	726	776	826	876	926	976
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28	78	128	178	228	278	328	378	428	478	528	578	628	678	728	778	828	878	928	978
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30	80	130	180	230	280	330	380	430	480	530	580	630	680	730	780	830	880	930	980
31	81	131	181	231	281	331	381	431	481	531	581	631	681	731	781	831	881	931	981
32	82	132	182	232	282	332	382	432	482	532	582	632	682	732	782	832	882	932	982
33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984
35	85	135	185	235	285	335	385	435	485	535	585	635	685	735	785	835	885	935	985
36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
38	88	138	188	238	288	338	388	438	488	538	588	638	688	738	788	838	888	938	988
39	89	139	189	239	289	339	389	439	489	539	589	639	689	739	789	839	889	939	989
40	90	140	190	240	290	340	390	440	490	540	590	640	690	740	790	840	890	940	990
41	91	141	191	241	291	341	391	441	491	541	591	641	691	741	791	841	891	941	991
42	92	142	192	242	292	342	392	442	492	542	592	642	692	742	792	842	892	942	992
43	93	143	193	243	293	343	393	443	493	543	593	643	693	743	793	843	893	943	993
44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994
45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997
48	98	148	198	248	298	348	398	448	498	548	598	648	698	748	798	848	898	948	998
49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999

+590a

Amora

Eq 25a

* 9. Things are
of the same
1940b + 28a

have 2 sheets

Dpl. nos. are ~~not~~ among unicates
If possible one should go into Manila
dup's either before or after mounting.

479

482

198

Dpl. nos. second set given
B.P. 9. rather than Manila.

60

414

694

744

— no. Hydnocepus antihelminthicus H
Bangkok

Checked by E. P. K. in distribution.

SMITHSONIAN INSTITUTION

United States National Museum

Collection of J. F. Rock

nos 1000-1190

Package No. 13083

1000	1050	1100	1150	1200	1250	1300	1350	1400	1450	1500	550	600	650	700	750	800	850	900	950
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2	52	102	152	202	252	302	352	402	452	502	552	602	652	702	752	802	852	902	952
3	53	103	153	203	253	303	353	403	453	503	553	603	653	703	753	803	853	903	953
4	54	104	154	204	254	304	354	404	454	504	554	604	654	704	754	804	854	904	954
5	55	105	155	205	255	305	355	405	455	505	555	605	655	705	755	805	855	905	955
6	56	106	156	206	256	306	356	406	456	506	556	606	656	706	756	806	856	906	956
7	57	107	157	207	257	307	357	407	457	507	557	607	657	707	757	807	857	907	957
8	58	108	158	208	258	308	358	408	458	508	558	608	658	708	758	808	858	908	958
9	59	109	159	209	259	309	359	409	459	509	559	609	659	709	759	809	859	909	959
10	60	110	160	210	260	310	360	410	460	510	560	610	660	710	760	810	860	910	960
11	61	111	161	211	261	311	361	411	461	511	561	611	661	711	761	811	861	911	961
12	62	112	162	212	262	312	362	412	462	512	562	612	662	712	762	812	862	912	962
13	63	113	163	213	263	313	363	413	463	513	563	613	663	713	763	813	863	913	963
14	64	114	164	214	264	314	364	414	464	514	564	614	664	714	764	814	864	914	964
15	65	115	165	215	265	315	365	415	465	515	565	615	665	715	765	815	865	915	965
16	66	116	166	216	266	316	366	416	466	516	566	616	666	716	766	816	866	916	966
17	67	117	167	217	267	317	367	417	467	517	567	617	667	717	767	817	867	917	967
18	68	118	168	218	268	318	368	418	468	518	568	618	668	718	768	818	868	918	968
19	69	119	169	219	269	319	369	419	469	519	569	619	669	719	769	819	869	919	969
20	70	120	170	220	270	320	370	420	470	520	570	620	670	720	770	820	870	920	970
21	71	121	171	221	271	321	371	421	471	521	571	621	671	721	771	821	871	921	971
22	72	122	172	222	272	322	372	422	472	522	572	622	672	722	772	822	872	922	972
23	73	123	173	223	273	323	373	423	473	523	573	623	673	723	773	823	873	923	973
24	74	124	174	224	274	324	374	424	474	524	574	624	674	724	774	824	874	924	974
25	75	125	175	225	275	325	375	425	475	525	575	625	675	725	775	825	875	925	975
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33	83	133	183	233	283	333	383	433	483	533	583	633	683	733	783	833	883	933	983
34	84	134	184	234	284	334	384	434	484	534	584	634	684	734	784	834	884	934	984
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36	86	136	186	236	286	336	386	436	486	536	586	636	686	736	786	836	886	936	986
37	87	137	187	237	287	337	387	437	487	537	587	637	687	737	787	837	887	937	987
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44	94	144	194	244	294	344	394	444	494	544	594	644	694	744	794	844	894	944	994
45	95	145	195	245	295	345	395	445	495	545	595	645	695	745	795	845	895	945	995
46	96	146	196	246	296	346	396	446	496	546	596	646	696	746	796	846	896	946	996
47	97	147	197	247	297	347	397	447	497	547	597	647	697	747	797	847	897	947	997
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49	99	149	199	249	299	349	399	449	499	549	599	649	699	749	799	849	899	949	999

161-

- ~~231~~-299 Doi Chom Cheng.
300-303 Hoi Chan Kiang.
399 " " "
400-4~~82~~ Summit Doi Chom Cheng.
244 ³⁶
- 437-462 Hue Me Pan (river).
463-478 Dol Soop Khang
479-485 Along the Meh Ping at Doi Noi.
486-519 Lad Bua Kac, near Korat.
521- 66 Along the Meh Ping at Soop Chem.
567-590 Along the Meh Ping at Um Päh.
591-600 " " " " " Um Pat.
601-622 " " " " " Fa Man
623-631 " " " " " Om Lu Rapids.
632-635 " " " " " at Kaw Sam Gnow.
636-638 Raheng to Pang Ma Kham Pom.
- 678-728 Myawaddi to Kawkereik Hills
- 729-772 Martoban
- 790-842 Chaing to Khoung Kyew and Kyokta.
843-860 Okma, on the Chindwin River.
- 884-909 Dibru and Berjan forest reserves.
- 921-952 Myawaddi to Kawkereik Hills.

add the digit 1 to 500

.

cut + paste

Data for nos. 1500 - 1527

Iron
Blue on bond
or Xerox

no 231 - 952

p 31 = grasses
33 = Siamese + Lao names
in plants

Dai Chom Chang summit and forests from 5000 - 5500 feet.

November 1 - 5th, 1920. J. F. Rock.

- 231 tree; 235 tree; 236 fern; 237 fern, 238 epiphytic on trees;
239 fern epiphytic, 240 herb Achyranthes; 241 Commelina?; 242 tree;
243 Lepers Island used for ground worm.
246 Globa?
247 Pinus khasia,
248 tree;
249 fern epiphytic
250 fern epiphytic
252 tree
253 tree
254 small tree two spec.
256 vine
257 tree
258 tree
260 shrub Croton?
261 " ----
262 Rubus
263 Hibiscus ?
264 Castanea sp?
265 Legume
266 Picus hirta?
267 Rubus
268 Iridaceae growing under pines on grassy ridges.
269 Maesa; tree
270 tree?

- 271 Quercus
272 "
273 Castanea
274 Quercus
275 tree,
276 Quercus
277 Legume vine pale red flowers.
278 Graphelium
279 Loranthaceae red flowers parasitic.
280 tree
281 Quercus
282 "
283 tree?
284 Ardisia at Hai Chau Kiang.
285 Grass
286 Legume
287 Moss
288 Disporum pulum
289 Labiate shrub
290 Leguminous vine, flowers pale red.
291 Small tree berries white.
292 tree,
293 leguminous shrub
294 shrub - tree
295 leguminous vine
296 tree
297 leguminous shrub

- 298 Alpinia
 299 epiphitic
 300 Dioscorea at Hai Chan Kiang
 301 ----- " " " "
 302 shrub " " " "
 303 leguminous vine " "
 304 Thespenia
 305 Smilax macrophylla
 306 Desmodium "
 307 vine
 308 vine flowers blue
 309 terrestrial leafless flowers red.
 310 tree like Cordia, no flowers nor fruits.
 311 leguminous shrub, flowers dark blue.
 312 shrub
 313 composite
 314 leguminous shrub.
 315 labiate shrub
 316 tree small
 317 common tree Sallicia?
 318 small tree
 319 flowers white and pink leafless, dry grassy ridge under pines, 5500 ft
 320 flowers white Comp. " "
 321 tree
 322 Rubus
 323 Cassia grassy places
 324 Polygal. flowers yellow
 325 Orchid

- 326 under pine trees. 5500 ft.
327 in company with 323
328 Thunbergia, vine, flowers white.
329 Thunbergia, small flowers white.
330 Thunbergia, -----
331 Quercus
332 tree
333 Melastoma
334 Erodia triphylla
335 Euphorbiaceae? photographed undershrub.
336 tree
337 vine fl. small white.
338 Myrsine
339 Blumea? very common
340 tree
341 Rubus
342 Begonia leaves colored.
343 tree
344 Erodia triphylla
345 Quercus?
346 Clerodendra, red flowers, at Hai Chan Kiang.
347 Smilax macrophylla
348 fern
349 " epiphytic
350 " "
351 " "
352 " "
353 " "

- 354 tree fern, see photo
355 fern epiphytic
356 " "
357 Polypodium epiphytic
358 " "
359 fern epyphytic
360 " "
361 " "
362 " "
363 " "
364 " "
365 " "
366 " terrestrial, dense forest, 5000 ft.
367 " epiphytic
368 " "
369 " terrestrial
370 " epiphytic
371 Smilax
372 legume flowers pale red.
373 Urticaceae
374 shrub
375 small tree
376 " "
377 " " 50 ft. high.
378 Castanea
379 shrub
380 "

- 381 Wallichia ? flower white.
- 382 Cinamonum tree, bark very fragrant, but leaves not.
- 383 tree
- 384 "
- 385 "
- 386 "
- 387 "
- 388 " small
- 389 Memecylon ?
- 390 tree
- 391 "
- 392 "
- 393 flat vine creeping on trunks of trees.
- 394 tree
- 395 Rubus
- 396 shrub
- 397 Composite
- 398 leg. flowers yellow and dark purple, vine.
- 399 Smilax Hai Chan Kiang
- 400 small tree
- 401 Costus
- 402 Quercus
- 403 Memecylon
- 404 small tree
- 405 Ardisia
- 406 tree common
- 407 Ardisia

- 408 shrub Hai Chan Kiang
- 409 Thunbergia
- 410 tree small brittle
- 411 shrub, berries red.
- 412 Urticaceae
- 413 Impatiens
- 414 Quercus junghunii Makaw Bai
- 415 shrub
- 416 small tree
- 417 Polygonum
- 418 Bauhinia
- 419 legume
- 420 tree
- 421 composite
- 422 small tree
- 423 Epilionaceae
- 424 shrub
- 425 " near waterfalls and along streambed gesneriaceae.
- 426 Balanophoraceae Hoi Chan Kiang
- 427 Smilax
- 428 Urticaceae dense forest, undergrowth
- 429 Rutaceae tree.
- 430 tree
- 431 Quercus sp?
- 432 Leg. vine.
- 433 Composite, flowers yellow, in forest.
- 434 tree, forest jungle
- 435 small tree, gnarled branches on edge of clearings, 5500 feet.

-Ba

436 Crotonopsis wet forest 5500 feet, flowers white.

449 fern epiphytic

450 fern epiphytic

Valley of Hueme pan. Nov. 5, 1920, below Doi Chom Cheng. West side

229 fern; 230, 232 grass; 233 Campanumoea, vine; 234 fern;

244 Disporum calcar. 245, 251 shrub; 259 small tree.

437 Livistona sp?

438 fern terrestrial along stream.

439 shrub, berries dark blackish

440 fern terrestrial in dense forest at the foot of tree trunks.

441 Piper

442 Weed, flowers yellow.

443 Polygonum

444 fern terrestrial dense shade

445 fern " to creeping

446 " epiphytic

447 tree Sapindaceous. Slopes of Dai Chom Cheng, north east.

448 tree, Dai Chom Cheng forest.

451 Lycopodium epiphytic

452 Croton, dense forest

453 vine flowers white, climbing over bushes, dense forest.

454 fern epiphytic

455 fern "

456 vine flowers red, dense jungle.

457 Achyranthes wet forest

458 grass in wet forest on edge, and clearings

459 Cyperaceae, wet forest

460 Pratia on ridges, forest outskirts.

461 Asplenium terrestrial

462 herb, flowers white up to 5500 ft.

Doi Pak Soop Khang, along Me Ping.

Went up a small rock, hill covered with deciduous jungle. the trees were mainly of the Leguminosae, Caesalpinia Sappan being the most Bambusa, Vitex pubescens? a Verbenaceae plant resembling a Leonurus, Eupatorium, the most common. Granite blocks of large size also quartz; exceedingly dry small plants were Barleria, Selaginella, Globba, Zingiber. Dec. 5, 1920. 800 feet elevation. The following numbers collected.

463 Verbenaceae very common in the low land.

464 a large tree, 50 ft.

465 a small tree 15 to 20 feet.

466 Vitex pubescens, a common tree near the river. Me Ping at Soop Khang.

467 Caesalpinia Sappan very common, the most numerous of all trees.

468 A small tree near riverbed.

469 A " " Sapindaceae?

470 Diospyros mollis, a tree 40 feet high, quite common, fruits found on ground.

471 a shrub or small tree with long rambling branches, Lapindaceae?

472 a leguminous vine, perhaps Desmodium.

473 Plumbago sp? flowers purple, long, rambling over bushes.

474 Hoya sp. climbing over shrubs.

475 Barleria sp? terrestrial in shade.

476 Zingiber? terrestrial in shade.

477 Barleria sp? large leaved.

478 Vine ?

Wat Dai Noi.

Collected the following plants, December 3, 1920.

The hill on which a small wat is situated, was covered with Caesalpinia, Albizia sp?, a Bombax and a possible Gossypium resembling the genus Kokia.

479 Ziziphus sp? with small black fruits, a shrub(spiny)

480 Selaginella sp? , Terrestrial.

481 Anonaceae, small tree opposite Dai Noi, on river bank.

482 Ziziphus sp? large fruited, a medium-sized tree along river bank.

483 A tree, common on Doi Noi, also on Dai Soop Khang.

484 Bombax? or Gossypium

485 A larger tree than 484.

Korat --- Lad Bua Kao. Deciduous jungle.

Nov. 22, 1920.

486 Combretum sp? a tree common.

487 Rubiaceous tree near Naucles.

488 Commellina sp?

489 Crewia sp? a shrub or bush.

490 A small tree.

491 A tree perhaps related to Ziziphus.

492 A small tree edible fruits.

493 An Asclepiadaceae, vine terrestrial.

494 Carissa sp? a small tree

495 Ziziphus sp? not edible.

496 Pterocarpus macrocarpus, one of the most important timber trees of Korat.

- 497 Hydnocarpus anthelminticum growing wild.
- 498 Polysalthea, a small tree.
- 499 Araceae, terrestrial.
- 500 Sapindaceae? tree.
- 501 Leguminous tree, dry region.
- 502 Rutaceae? tree with small fragrant yellow flowers, cultivated
in Honolulu, (same as in Mrs. Mead's yard, Honolulu.)
- 503 Pteris sp?
- 504 Lygodium climbing.
- 505 Commelina sp? Plant reddish.
- 506 Graminaceae
- 507 "
- 508 Euphorbiaceae small shrub.
- 509 Bauhinia small tree
- 510 Grewia shrub.
- 511 Combretum, climbing.
- 512 Polypodium epiphytic
- 513 aroid, climbing
- 514 Achyranthes
- 515 Malvaceae, Long twining with -----
- 516 Leguminous plant.
- 517 Euphorbiaceae? tree.
- 518 Rutaceae shrub small tree
- 519 Dalbergia sp? tree.
- 520 From Dai Lootex, Dec. 2, 1920. Irvingia - Simaroubaceae, nut
edible and oil is expressed from the seed; called Mak Muan.

December 6th, stopped and collected at Soop Chem, trees called Ma Pop with spheroidal prints. A polyalthea is common, the soil is very sandy, in fact is fine silt or sand from the river.

Mo Ping River.

521 Labiate

522 A tall fleshy plant with large very compound leaves, native name, Melin mai siamese Maklin Mai., in dense jungle.

523 Cucurbitaceae

524 Short plant, 5 ft. high, Euphorbiaceae

525 Selaginella

526 Desmodium

527 Gramineae, open places.

528 Polyalthea a tree with drooping dense crown.

529 Euphorbiaceae dense jungle.

530 ~~Combretaceae~~ vine *Bissacca*

531 Rubiaceous shrub with spines long climbing branches, nat.name Ham lek Kan.

532 A tree with pendant branches, native name, Ma ong nuk.

533 Tree, small.

534 Datura sp? 3-4 feet high.

535 Leguminosae vine.

536 A climber with very fragrant flowers

537 Crotalaria

538 Combretum

539 Lagerstroemia, tree

540 Tecoma

541 Tree or large shrub with rambling branches

542 Gramineae

543 Weed on river bank

- 544 Vitis sp? climber.
- 545 Gramineae
- 546 Caesalpinia, climbing shrub.
- 547 Cucurbitaceae, flowers white.
- 548 Climber, yellowish, small flowers.
- 549 Twining herb with pink flowers open ground.
- 550 Trailing Hibiscus with yellow flowers and deep purple center, spiny
- 551 Cucurbitaceae, small orange yellow fruits.
- 552 Moringa obifera? cultivated near village.
- 553 Broussonetia papyrifera, a tree, fruits red, fleshy.
- December 7, collected at Ban Noi in Teak forest, walked along through the rocky hills covered mainly with Teak etc.
- 554 Meliaceae tree, 25 ft. tall, fruits in terminal panicles.
- 555 Meliaceae trees with axillary spikes, perhaps Amoora?
- 556 Mezocneuron
- 557 Lygodium
- 558 Climbing vine thick leathery leaves, flowers yellow.
- 559 Shrub growing in streambed with huge root system, very common.
- 560 Rubiaceae shrub, low, 3 feet high.
- 561 Albizia or Acacia shrub or tree.
- 562 Desmodium pulchrum?
- 563 Shrub or small tree with rambling branches.
- 564 Amarantaceae herb.
- 565 Small tree with cherry-like fruits, native name Kon ta.
- 566 Datura sp?

On December, stopped at Um Pah, a steep rocky hill, the mountains are close together, and the banks of the stream very steep. Bamboo forms most of the growth with occasional trees which were neither in flower nor in fruit.

- 567 Crotalaria with blue-purple flowers, 3 feet tall.
- 568 Antidesma, small tree.
- 569 Desmodium with cylindrical viscous pods.
- 570 Globba, among rocks.
- 571 Labiata with purple flowers.
- 572 Leguminous plant erect, 2 feet.
- 573 Herbaceous plant, Acanthaceae ?.
- 574 Barleria, small plant
- 575 Desmodium
- 576 Herbaceous plant, terrestrial, 1 foot.
- 577 Begonia in rocks, native name (Burmese) Chow chin boung.
- 578 Impatiens ? with blue flowers.
- 579 Acanthaceae with whitish flowers.
- 580 Acanthaceous herb, deep purplish blue flowers in sand near river.
- 581 Acanthaceous herb, purple flowers.
- 582 Meliaceous tree Amoora ? near river bank.
- 583 Shrub on river bank below high water, flowers small, yellow.
- 584 Euphorbiaceous herb, with lobed leaves, 3 feet high.
- 585 Labiate with pink flowers on river bank in sand.
- 586 A shrub or bush or small tree, Oleaceae?
- 587 Shrub along river near village.
- 588 A small tree with pendant branches.
- 589 Clerodendron, cultivated at Hiu Tatt.
- 590 Vine with fleshy leaves.

December 5, 1920, stopped at 4 p. m. at Um pat and collected the following; the hills rise steeply, are rocky and covered with scrub vegetation.

- 591 A tree 20 feet in height.
- 592 Albizzia, tree spreading crown, 30-35 feet.
- 593 Acanthaceous tree, flowers single.
- 594 Cucurbitaceous vine with red fruits.
- 595 Albizzia tree along river bank.
- 596 Cucurbitaceous vine.
- 597 Tree with pendant branches, fruits, standing erect on upper branches.
- 598 Bauhinia, small shrub, 10 feet high.
- 599 Plumbago with red flowers, native name Pipin Deng, is used in manufacturing liquor, is mixed with yeast.
- 600 Ficus with cauliflorous fruits, red when mature.

Stopped at Fa Man near the big rock of which I took a photo, the mountain is quite steep there and rocks numerous. December 9, 1920, early in the morning.

- 601 Desmodium sp? a shrub 5 ft.
- 602 A Labiate undershrub.
- 603 Euphorbiaceous shrub, flowers green, 6 ft. to 8 ft. high.
- 604 A tree with black berries and pale leaves, common name Mat Ka, common all along the He Ping in jungle.
- 605 An acanthaceous herb with a Katkin-like inflorescence.
- 606 Acanthaceous herb.
- 607 Bauhinia, tall climber as the snake-like stems, in dense forest.
- 608 Euphorbiaceous shrub with red capsules and red globose arranged male flowers.

- 609 Acanthaceae herb
- 610 Vitis sp? woody climber.
- 611 A strong shrub, apparently Euphorbiaceae, sand-binding and worthy of cultivation as a sand-binder and bank-binder along streams. The stems are exceedingly tough and can withstand the strongest current; grows right in the streambed and is submerged during high water. Mai Khai, native name.
- At Pa Khor, beyond the Kan bet fishing reef of the giant on the hill to the left where I net bear. Dec. 10, early morning.
- 612 Leguminous tree (small, 20 feet in height.)
- 613 Common tree all along the me Ping, Euphorbiaceae?
- 614 Grows very common on the slopes near the river bank at Pa Khor, beyond Kan bet.
- 615 Herb among rocks on hillside.
- 616 Labiate strongly scented with blue flowers growing among rocks.
- 617 A small tree probably araliaceous, 15 feet high, flowers pale and orange red growing among rocks with Bombax and Euphorbia, (cactus-like).
- 618 Ipomoea? climbing over shrubs in rocky places, flowers blue.
- 619 Mat Ka a tree, leaves used as a ferment in preparing liquor same as 604.
- 620 Crassulaceae growing among rocks, flowers yellow, leaves deeply divided, thick terete, pale green.
- 621 Crassulaceae leaves lanceolate, flower yellow, among rocks with candelabra-like branching Euphorbia.
- 622 Globba sp? among rocks.

Collected on rocks, steep cliff at right bank of Me Ping, beyond
Om lu, December 9th.

623 Yellow flowering (orange yellow), Acanthaceae shrub, very
spiny in comparison with Drecaenas and Euphorbias.

Collected at Om lu, the largest rapid, Dec. 9, on bank of
Me Ping where I took photos.

624 Bauhinia sp? small flowered, a huge climber covering trees
completely, inflorescence compound racemes turned upward, flow-
ers yellowish cream colored.

625 Broussonetia papyrifera, trees 30 feet in height on banks of
Meh Ping, next to No. 624.

626 Shrub with velvety leaves only one flower seen. (4 ft. High)

627 Shrub with reddish stems and flowers among rocks in streambed.

Collected between Banner and Pe Ha along stream, Dec. 10, 1920.

628 Cucurbitaceae? with red fruits (vine)

629 Bignoniaceous tree, yellow flowers and long terete fruits.

630 Desmodium, small, bushy grows on banks in silt.

631 Tall woody climber, probably Papilionaceae covering tall trees,
pods a velvety brown.

Collected on the sandbar at Kaw Sam, grow among pebbles,
December 11, 1920.

632 Cassia tora?

633 Convolvulaceous vine? Climbing over bushes.

634 Shrub very tough branches, flowers pretty pink.

635 Plumbago zeylanica in sand collected by gendarmes.

Near Raheng, collected the following along the banks of the
Me Ping on December 11, 1920.

- 636 Caesalpinia ? climbing or rambling shrub.
- 637 Shrub or vine? Collected by the captain.
- 638 Leguminous tree, 25 feet high, overhanging the river.

The following plants were collected in Burma between Miyawad-
di and Kawkerik, between Dec. 21 and 23, 1920 inclusive.

The numbers start from 678 to 728 inclusive.

- See page 27 for
introduction
numbers
etc.
- 678 Lygodium sp?
 - 679 Beyond Thinganyinon 3000 feet elevation, a tree.
 - 680 Anonaceous vine? Thinganyinon.

December 22, 1920.

- 681 Small tree
- 682 Leguminous tree, Thinganyinon
- 683 Undershrub.
- 684 Acanthaceous shrub, rain forest, shade.
- 685 " " blue flower, Thinganyinon.
- 686 Albizia tree, rain forest beyond Lukli
- 687 Globba, rain forest, Lukli
- 688 Vine or climbing shrub near Thinganyinon
- 689 Composite Kawkerik hills 23/20.
- 690 Meliaceous tree, thinganyinon.
- 691 Acanthaceous shrub, Kawkerik hills.
- 692 Morinda sp. shrub.
- 693 Pterospermum, semi sagittate, Kawkerik plain, Dec. 23, 1920.
- 694 Taraktogenos Kurzii? Thinganyinon forest.
- 695 Bauhinia from beyond Miyawaddi dry forest bamboo etc, Dec. 21, '20

- 696 Large tree with red fruits. Thinganyinon.
- 697 Tree Kawkereit hills, long pendant raceme, small white flowers.
- 698 Tree sp? Kawkereit hills, 4500 feet.
- 699 Ipomoea sp? very large flowers, 5 inches in diameter, Kawkereit hills.
- 700 Schima ? At Misty Hollow, Kawkereit hills.
- 701 Acanthaceous shrub. Thinganyinon.
- 702 Small tree or shrub, Kawkereit Plains.
- 703 Apocynaceous tree near Miyawaddi plains.
- 704 Quercus, tree, dry hills facing Kawkereit plain.
- 705 Tree, near top of Kawkereit hills
- 706 Anonaceous tree, fruit deep purple, Kawkereit plain with No. 693.
- 707 Ipomoea, top of Kawkereit hills.
- 708 Tree, beyond Lukli.
- 709 Ficus beyond Lukli.
- 710 Clorodendra near top of Kawkereit hills.
- 711 Rutaceous tree, Kawkereit hills.
- 712 Massaenda sp? near top of Kawkereit hills in wet shady places.
- 713 Tree, Kawkereit hills.
- 714 Rubiaceae, Psychotria ? Kawkereit hills.
- 715 Ternstroemiaceae, tree near misty hollow.
- 716 Tiliaceous? shrub, above Lukli.
- 717 Ficus sp. tree, Kawkereit hills.
- 718 Clorodendron, near top of Kawkereit hill.
- 719 Composite near to top of " "
- 720 Ficus small shrub, 3 ft. high, near top of Kawkereit hill,
Ficus Lamponga Mig.
- 721 Ternstroemiaceous tree, beyond Miyawaddi in Eng. forest with
Strychnos, Dipterocarpaceae etc.

- 722 Acanthaceous plant near top of Kawkereit hills.
723 Santalaceous tree from Thinganyinon.
724 Mussaenda variolosa? near top of Kawkereit hills.
725 Shrub, near top of Kawkereit.
726 Dalbergia sp?
727 Near top of Kawkereik hill
728 Crotalaria tetragona near top of Kawkeriek hill, 5000 ft.
Plants collected in the hills of Martaban near Paung and
especially in the mountains back of the village Oktada(Xaren).
From Nos. 729 to 772 incl. Jan. 6-9, 1921.
729 Gonocaryum-like shrub drooping branches, drupes pruinose,
lower forests.
730 Tree, lower forest.
731 Araliaceous tree, 300 ft. elevation.
732 Small tree, 500 ft. with Taraktogenos.
733 Euphorbiaceous shrub, 600 feet.
734 Rhamnaceae? shrub or small tree, fish poison.
735 Small tree with ascending branches and huge leaves, (terminal)
736 Bauhinia very common, lower forest, leaves glaucous beneath.
737 Small tree, lower forest.
738 Anonaceous climber, lower forest.
739 Shrub, rain forest, 900 ft.
740 Rubiaceous shrub, 1000 ft.
741 Shrub, lower forest
742 Small tree, lower forest
743 Mussaenda, mixed forest.
744 Taraktogenos Kurzii, 600 feet, elevated, the most common
tree at Oktada.

- 745 Small tree, lower mixed forest.
- 746 Globba? shady ravines.
- 747 Ardisia, 600 feet.
- 748 Aroid climber, very common on trees.
- 749 Composite vine lower mixed forest.
- 750 Fern, forms undergrowth but not common.
- 751 Ficus sp? cauliflorus, growing along streambed, Oktada.
- 752 Shrub, mixed lower forest.
- 753 Shrub, growing near streambed, 200 ft.
- 754 Shrub, lower mixed forest.
- 755 Composite, lower mixed forest.
- 756 Small tree, 500 ft.
- 757 Bauhinia sp? 400 feet, -500 ft.
- 758 Small tree, lower forest.
- 759 Fern very common in upper forests, 200 ft. elevation, forms the undergrowth in Taraktogenos forest.
- 760 Euphorbiaceous shrub, upper forest.
- 761 Ardisia sp? wet forest.
- 762 Rubiaceous ? shrub, upper forest.
- 763 Piper (wet upper forest 2000 ft.)
- 764 Small tree, mixed forest.
- 765 Globba ? wet forest.
- 766 ~~Ardisia~~, climber, lower mixed. *Dioscorea*
- 767 Clerodendran sp? mixed forest.
- 768 Jasminum sp? lower mixed forest.
- 769 Small tree, lower mixed forest.
- 770 Small tree or shrub, lower mixed forest.

771 Mallotus paniculatus, lower mixed forest.

772 Millettia sp? lower mixed forest.

Plants collected on upper Chindwin River, especially on Chin hill road from Kalewa, on up journey to Mawlaik and on return journey. January 15, 1920, and January 31st, 1921, (from No. 773 to 789.

773 Climber over shrubs.

774 Congea, Chinroad

775 Tree, (20 ft. in height, along Mhytte River.) Chin road.

776 Euphorbiaceous tree or shrub.

777 Vibaceous climber.

778 Common shrub, along Chin road, family Thymelaeaceae, genus Gyrinops, flowers scarlet, cultivated in Honolulu on Normal School grounds.

779 Huge strong climber

780 Euphorbiaceous tree, Chin road.

Collected on Jan. 31, 1921, on Chin hill road Kalewa, Burma.

781 Gyrinops, common shrub.

782 Papilion vine, covering shrubs.

783 Desmodium, large leaved, small tree or large shrub. A.

784 Congea Chin hill road.

785 Small tree or climber.

786 Desmodium shrub, 12-15 ft.

787 Climber.

788 Albizia tree. (Kalewa near Police station)

789 Tree very handsome, symmetrical crown, growing near Kalewa Cemetery.

Plants collected on the upper Chindwin River,

January 16 - 27th, 1921.

The following have been collected on the Khodan stream between Khayng or Khaing and Khoung Kyew as well as in the forests of the latter place proper, (790 to 842), including Kyokta.

- 790 Bauhinia a shrub near Thoung Dwin.
- 791 Leguminous climber, Khoung Kyew.
- 792 Tree, Khoung Kyew
- 793 Rubiaceous shrub, inflorescence orange colored, wet forest of Khoung Kyew.
- 794 Leca ? Khoung Kyew.
- 795 Forests near Khoung Kyew.
- 796 Desmodium ? near Khoung Kyew.
- 797 Adhatoda-vasica ? dense shade between Khoung Kyew and Thoung Dwin.
- 798 Clausena sp ? same place as 797.
- 799 Rubiaceous shrub, forests of Khoung Kyew.
- 800 Cultivated at Khoung Kyew pungi house.
- 801 Taraktogenos Kurzii, Gemine.
- 802 Graminaceae, near Khoung Kyew, Arundo donax.
- 803 Phlogacanthus in dense forest along stream, flowers crimson.
- 804 Bridelia sp? Kyokta village.
- 805 Crotalaria Kyokta village.
- 806 Climber, covering trees at Kyokta.
- 807 Desmodium ? At Kyokta.
- 808 Shrubby or small tree along Khodan stream near Kyokta.
- 809 Tree jungle at Kyokta.
- 810 Shrub, or climber with cream colored floral bracts.

- 811 Acanthaceous vine, flowers red, dense Kalaw forest at Kyokta.
- 812 Terminalia ? tree near Kyokta.
- 813 Shrub along Khodan stream, Kyokta.
- 814 Taraktagenos Kurzii. Kyokta forest.
- 815 Ardisia palycephala? Kyokta forest, big tree, dark leathery foliage.
- 816 Khodan stream, Leguminous shrub, Khoung Kyew.
- 817 Malvaceous shrub near Khoung Kyew along Khodan stream.
- 818 Jasminum, scandent shrub near Kyokta outskirts of forests.
- 819 Euphorbiaceous shrub, Khodan stream near Khoung Kyew.
- 820 Leguminous papilion shrub, between Khoung Kyew and Kyokta.
- 821 Desmodium shrubby, Kyokta.
- 822 Composite, Kyokta.
- 823 Fern, undergrowth in Kalaw forest at Kyokta (4 miles distant)
- 824 Mezenerium sp? climbed on Khodan River bank, Khoung Kyew.
- 825 Gramineae, near Khoung Kyew.
- 826 Linociera sp? forests of Kyokta (tree)
- 827 Dalbergia paniculata Kyokta forest, a crooked tree
- 828 Helicteris sp? near Kyokta, shrub.
- 829 Eurax ? Kyokta wet forest.
- 830 Tree, Kyokta forest.
- 831 Clematis, Kyokta forests.
- 832 Adhatoda vasica ? Kyokta forest.
- 833 Shrub, Kyokta forests.
- 834 Bridelia? Kyokta forest
- 835 Tree.
- 836 Desmodium shrub, Kyokta forest.
- 837 Mussaenda shrub 15 feet. Khoung Kyew.

- 838 Labiatae, herb, Claywalls, near Khoung Kyew.
839 Acanthaceae shrub, blue flowered, 3 ft. high, Khoung Kyew.
840 Desmodium sp? Kyokta. Khoung, Kyew.
841 Ardisia Polyccephala, Kykta, tree.
842 Climber on banks of Khodan stream near Khoung Kyew.

Collected the following plants at Okma on the Chindwin River, Febr. 1, 1921. Dry scrub jungle around paddy fields.

- 843 Zizyphus jujuba, shrub (seeds collected)
844 Climbed with white flowers.
845 Climbing shrub, covering trees.
846 Very common shrub, drooping branches, fruit bladdery red.
847 Loranthus, large leaved.
848 Tree, drooping branches, coll. also in Siam.
849 Tree or climber ?
850 Vine (over shrubs.)
851 Small tree, flowers white.
852 Small terrestrial plant, whole height, berries red.
853 Climber, flowers pink.
854 Clerodendron nutans.
855 Tree quite leafless at time of flowering.
856 Climber over trees.
857 Shrub or small tree flowers white.
858 Euphorbiaceae male tree.
859 Loranthus, small leaved
860 Vanda, flowering, pale purple and white.

Plants collected between Tinsukia and Rangagora, flat
jungle land secondary growth, North Eastern Assam, Feb. 19, 1921.

- 861 Laportea crenulata Gaud. shrub with stinging leaves.
- 862 Apocynaceous vine.
- 863 Sterculia villosa Roxb. a small tree flowering but leafless.
- 864 Adhatoda vasica Nees. A shrub with white flowers and pinkish
markings, branching like Clermontia, also observed at Pandu
station.
- 865 Cassia hirsuta Linna, a shrub with hirsute pods along road-
side.
- 866 Phlogacanthus sp? a shrub, in open scrub vegetation, flowers
Henna red, capsules darker red, racemes terminal.
- 867 Cinamonum sp? A tall tree, common.
- 868 Litsea polyantha, a fairly large tree,
- 869 Celastraceae ? A shrub, flowers white.
- 870 A small tree.
- 871 Elaeocarpus sp? perhaps acuminatus. A small tree, flower whitish.
- 872 Euphorbiaceous shrub with orange yellow fleshy capsules arranged
axillary.
- 873 A Rhamnaceous shrub or small tree, flowers white.
- 874 Phlogacanthus, probably Gillichii ? Leaves lanceolate
downward bent at acute angles to the stem which is quadrangular.

Plants collected near Dibru River near Dibru forest reserve,
in the vicinity of the forest bungalow. Febr. 19, 1921.

J. F. Rock and Dr. E. Muir.

- 875 Gynocardia odorata medium sized tree.
- 876 Anonaceous? scandent shrub.

- 877 Small tree.
- 878 Mezoneurum sp? a climber.
- 879 A small tree or shrub with branchlets at right angles to stem, probably Clausona.
- 880 Acacia sp? A shrub scandent.
- 881 Small tree.
- 882 Celastraceous ? shrub flowers white
- 883 Elephant grass.
- Plants collected in Dibru forest reserve, Feb. 20, 1921.
- See description.
- 884 Gynocardia odorata, a tall tree, leaves dark green, petioles not thickened, fruits borne on the trunk and old branches.
- 885 A Rubiaceous plant, bush, 3 feet high, fruits white.
- 886 Botrychium sp ? A native medicine for fever (Mishmi tribe.)
- 887 Euphorbiaceous tree with pendulous flowers.
- 888 Balsamum sp? herb.
- 889 Blue-flowered Acanthaceous shrub, similar to the red flowered one in Burma.
- 890 Rubiaceous plant with red berries, small subherbaceous.
- 891 Bauhinia sp? Small tree.
- 892 Phlogacanthus same as in Upper Burma.
- 893 Small tree.
- 894 An Urticaceous (strong) liana.
- 895 Small shrub, 4 feet high, leaves pale green, fruits white.
- 896 Selaginella sp? A climbing or twining species, terrestrial over herbs and bushes.
- 897 Taraktogenos Kurzii.

Plants collected on way to Bher jan Forest Reserve, seven miles from Dibru Reserve, (Rangagora) Febr. 21, 1921.

- 898 Heleropanax ? A small tree with multi-compound horizontally spreading leaves. Trunk very spiny.
- 899 Dipterocarpus pilosus, a tall tree, veins more numerous than D. Mannii.
- 900 Duabanga sonneratioides (Lythrac.)
- 901 Composite flowers, purplish. 4 - 5 feet high.
- 902 Bamboo, Dendrocalamus Hamiltonii, native name, Kako, tall branches with drooping. Photographed thin species, 2 photos.
- 903 Rhamnaceous shrub or small tree.
- 904 Phyllanthus?
- 905 Rubiaceous shrub, white fruits, 2 - 3 feet high.
- 906 Medinella? flowers white.
- 907 Rubus sp? large climbing shrub.
- 908 Dipterocarpus Mannii, a tall tree fruiting.
- 909 Brassaiopsis rufostellata? A small tree, spiny, but less so than Heteropanax.
- 910
- 911 Thysanolaena maxima (Roxb.) Ktze. The tall broad-leaved grass on top of Dai Chom Cheng at that time not in flower.
- 912
- 913 Dendrocalamus Brandisii Kurz. The tall bamboo near Dai Paw Naw with man standing there.

Plants collected between Raheng and Mesawl in Siamese Territory, from December 15, to Dec. 20.

The plants collected on the 15th, were from dry jungle Leguminosae, Randia, Zizyphus, etc.

- 639 Small tree with rambling branches, dry forest. 12/15/20.
- 640 Shrub, dry forest. 12/15/20
- 641 Bambusa, dry forest, 15-20/20.
- 642 Bambu grass, wet forest. 15-20/20
- 643 Shrub.
- 644 Tree (tall) along road near village 17/20
- 645 Desmodium shrub, dry ridges.
- 646 Lagerstroemia tree, beyond Palut, 17/20.
- 647 Tree on wooded ridges at Nam dip, 18/20/
- 648 Tree, beyond Palut in dry jungle.
- 649 Tree before getting to Palut on ridges. Overlooking the plain
of Palut, dry jungle.
- 650 Leguminous tree, Dec. 17/20.
- 651 Hibiscus flowers yellow.
- 652 Creeping herb with red berries standing erect. Pang Ma Kham
forest, dense jungle with Pandanus.
- 653 Fern, along stream near Ma Kham pang.
- 654 Bamboo, giant took photo at Dai Pa Waw, Dec. 19/20.
- 655 Xylia dolabriformis, tree, little beyond Mesawt, near Burmese
border, Dec. 21/20.
- 656 Bauhinia, small tree, Mesawt, Dec. 21, '20, Flowers purple.
- 657 Tree, mountains near Mesawt, Siam.
- 658 Calbergia? Tree, near Dai Paw Waw.
- 659 Apocynaceous tree, beyond Paw Waw, Siam, Dec. 19/20.

- 660 Bauhinia shrub, 10 ft. Paw Waw, December 19, 1920.
- 661 Phloganthus, shrub along creek at Pang Ma Kham Pom, Siam, December 16, 1920.
- 662 Large tree (Lapindae?) rain forest of Pang Ma Kham Pom. December 16, 1920.
- 663 Leguminous tree beyond Paw Waw, December 20, 1920.
- 664 Climbing shrub near Paw Whaw, December 20, 1920.
- 665 Large spreading tree with pinkish flowers beyond Paw Waw, between Nam Dip and Pang luang, December 19, 1920.
- 666 Composite in Dipterocarpus jungle on stony ridge near Palut, December 17, 1920.
- 667 Citrus sp? A shrubby tree with large pinkish flowers on tall wooded ridge between Pang ma Kham pom and palut.
- 668 Fern near Doi Paw Waw. Dec. 18, 1920.
- 669 Bignonisecous tree, flower whitish cream colored, not yellow, (smaller) on top of Mt. range near Nam dip. 12/17/20/
- 670 Tree near Nam Dip on dry ridge looking toward Paw Waw, December 18, 1920.
- 671 Dillenia sp? In huge tree grove near stream beyond Palut. December 17, 1920.
- 672 Piper sp? near Paw Waw, December 17, 1920.
- 673 Solanaceous shrub. Nam Dip, December 18, 1920.
- 674 Papilionaceous climber, large blue flowers, beyond Ban Chang tai, December 16, 1920.
- 675 Zizyphus shrub, beyond Raheng, December 15, 1920.
- 676 Papilion vine, growing with 674 beyond Ban Chang tai.

Continued.

- 861 Meliaceous tree at Pang ma Kham pom, probably Amoora.
914 Quercus (a tree) Kawkereik hills, Burma, Dec. 23, 1920.
915 Zizyphus near Raheng, Dec. 16, 1920.
916 Grewia " " " " "
917 Weed near Raheng in dry forest, bluish in color. Dec. 16, 1920.
918 Vine or large climber forests of Raheng, Dec. 16, 1920.
919 Rubiaceous tree, raheng dry forest Dec. 16, 1920.
920 Dry jungle near Raheng.

Plants collected near Myawaddi to Kawkereik, Burma.

December 20-24, 1920.

- 921 Climber, wet forest along bank.
922 Tree 4000 ft. elevation, wet forest.
923 " on dry Kawkereik plains, Dec. 23, 1920.
924 Climbing shrub. " " " " "
925 Tree Kawkereik Hills.
926 Tree (small) Kawkereik plain.

Plants collected around Siam camp where I took photo of
trees, cot, etc.

- 927 Shrub, drooping branches.
928 Meliaceous tree, 70 feet tall.
929 Small tree, fruits white, Urticaceous.
930 Tree, fruits white.
931 Acanthaceous shrub.
932 Bauhinia tree drooping fruiting stalks, near Raheng, 12/17/20.
933 Tree near Raheng, Dec. 17, 1920.

- 934 Leguminous tree Kawkereik hills, Burma, Dec. 21/1920.
- 935 Megoneurium climbing shrub, Kawkeriek hills.
- 936 Kawkereik hills, Burma, Dec. 19, 1920.
- 937 Urticaceous tree, Kawkereik hills, 12/22/20
- 938 Maesa sp?
- 939 Kawkereik hills, 4000 ft. 12/21/20.
- 940 Tree, Kawkeriek plain, 12/23/20.
- 941 Combretum, Kawkereik plains, Dec. 23, 1920.
- 942 Rutaceous tree at Pang Ma Kham Pom, wet forest, 12/18/20.
- 943 Loranthaceae on big trees at Nam Dip Siam, Dec. 17, 1920.
- 944 Lagerstroemia from beyond Palut, dry forested plain with
Dendrocalamus strictus, December 17, 1920.
- 945 Same locality as 944. Strychnos.
- 946 Randia sp? same locality as 944.
- 947 Cassia fistula, Palut, Dec. 17/1920.
- 948 Spatholobus Roxb., beyond Palut., Dec. 17, 1920.
- 949 Gramineae (Setaria Forbesiana) Hook. Wat Lum near Bangkok.
- 950 Oryza sativa Chiangmai black ridge.
- 951 Eragrostis interrupta 500 ft.
- 952 Aristida ascension Dai Lootex.

GRAMINEAE, SIAM.

147 Oplismenus compositus

949 Setaria forbesiana Hook.

950 Oriza sativa black rice Chiengmai

217 Manisuris sp?

187 " striata (Nees) C. Ktze.

This is the tall grass with breaking narrow fruits like worm.

216 Maesthia merguensis A. Camus.

208 Themeda gigantea var. arundinacea. The tall grass on top of Dai Chom Cheng like Hafer in company.

109 Same as 208 lower down.

212 Themeda triandra, a smaller species, 5500 feet.

145 Centrothea lappacea, 3500 feet.

506 " "

119 Arundinella setosa 3000 feet.

120 " "

231 " "

527 Eragrostis amabilis (L.) Wight et Arn.

951 " interrupta

210 Heyraudia madagascariensis (Kth.) Hook.f. Tall grass under Glochidion on right hand side with fine Eragrostis-like inflorescence. 5500 feet.

952 Aristida ascension.

507 Aristida Boissii Camus.

542 Leptochloa chinensis (L.) Nees.

85 Eulalia quadrinervis (Hook.) Ktze. This is the common grass with purple inflorescence all over Doi Looter (like Chloris)

- 458 Eubalia imberbis (Nees.) Small grass, wet forest.
- 207 " " " "
- 211 " " " "
- 614 Holcus purpureus sericeus (Hochst.)
- 213 Panicum montanum Roxb. 5500 ft.
- 124 " " 3000 ft.
- 209 " " 5500 ft.
- 206 Choetochloa neurodes Schult.
- 143 Isachne Albens. Trin.
- 76 Oplismenus compositus.
- 162 Glochidion Velutinum, a single tree photographed on top.
- 154 Anneslea fragrans.

SIAMESE AND LAO NAMES OF PLANTS.

Mai Pue Kan	equals	<u>Lagerstroemia</u>	88
Sow	"	"	89
Mai Sau	"	"	90
Ki Sua Luang	"	<u>Cassaria</u>	92
Dauk oon	"	<u>Viburnum</u>	
Mai Toom	"	<u>Anthocephalus</u>	99
Bok Kem bai	"	<u>Mussaenda</u>	103
Dauk Kem	"	<u>Ixora</u>	
Khem Peh	"	<u>Pavetta</u>	109
Kam Yan	"	<u>Styra</u>	126
Kio Kon Mai	"	<u>Oxystelma</u>	
Hawng Kai	"	<u>Chloranthus</u>	176
M' Kai	"	<u>Glochidion</u>	184
Kow San	"	<u>Phyllanthus</u>	
Ma Kam Paum	"	"	185
Ma Fai	"	<u>Scaevola</u>	188
Paw Pan	"	<u>Trema</u>	195
Dauk La La	"	<u>Allacanthus</u>	196
Mai La La	"	"	"
Pah Hoht	"	<u>Eugehardtia</u>	
Chi Cha	"	<u>Hibiscus</u>	23
Lieng	"	<u>Excoelara</u>	26
Yap	"	<u>Grewia</u>	27
Mai Mun	"	<u>Placocarpus</u>	30
Puk Pem	"	<u>Toddalia</u>	32
M' Yom Pa	"	<u>Acronychia</u>	"

Siamese and Lao Names of Plants.

Nam Kua Kai	"	<u>Luvunga</u>	33
M ' Mun	"	<u>Irvingia</u>	
Mai Hahn Kahn	"	<u>Amoora</u>	36
Mai Neua Neua	"	<u>Lophopetalum</u>	39
Keua Kwan	"	<u>Millettia</u>	55
Ma Chohk	"	<u>Schleicheria</u>	46
Mai Hak	"	<u>Melanowhoa</u>	48
Dawk Kem	"	<u>Desmodium</u>	57
Hahn Chahn	"	<u>Mezocurum</u>	
Puk Nawng	"	<u>Neptunia</u>	77
Mai Deng	"	<u>Xylia</u>	78
M ' Na	"	<u>Terminalia</u>	82
Ba Hok Fah	"	"	"
Mai Sau	"	<u>Calycapteris</u>	83
" Hio	"	<u>Anogeissus</u>	"
Mai Kaw	"	<u>Tristania rufescens</u>	84
M'Sang Kweng	"	<u>Dillenia Kerrii</u>	
" Luang	"	<u>Dillenia pulcherrima</u>	
Bun ta	"	<u>Talauma</u>	
Chum pi	"	<u>Michelia</u>	
Moom Woa	"	<u>Unona dubia</u>	
S 'Bun Nga Pa	"	<u>Goniotalamus</u>	
Hun Chang	"	<u>Platymitra</u>	
Lep Mean	"	<u>Capparis</u>	
M 'Kwen	"	<u>Fleacourtia</u>	
Pawng	"	<u>Garcinia</u>	
Salup Pi	"	<u>Cochrocarpus</u>	

Siamese and Lao Names of Plants.

Moh Tah Loh	equals	<u>Schima</u>
Miong Pa	"	<u>Camelia</u>
Mai Yang	"	<u>Dipterocarpus alatus</u>
" " Pai	"	" <u>costatus</u>
Mai Krat	"	" <u>intricatus</u>
" Hieng	"	" <u>obtusifolius</u>
" Tieng	"	" <u>tuberculatus</u>
" Yang	"	" <u>turbinatus</u>
K' Yawm	"	<u>Shorea floribunda</u>
Mai Ugaa	"	" <u>obtusa</u>
" Takien	"	<u>Honea odorata</u>

Gon Chon Chong. Moss forest to blue
me me

- 500 Asplenium
01 moss
2 Polypod.
3 Leptochilus
4 Polypod. membranaceum Lam
5 Polypod. sp?
6. Isteris
7 Diplazium
8 Cyclophorus
9 Asplenium
10 angiopteris
11 Dryopteris
12 " hirtipes (Bl.) Ktze
13 orchid
14 Polypod.
15 Polypod.
16 Elaphogloss.
17 Hymenoph.
18 "

- 19 Legum
20 Asplenium
21 Hymenophyllum
22 Moss
-

Tamp Na Kham Tom

- 23 Microlepia
24 Tectaria
25 Blechnum orientale
26 Platynerium
27 Lygodium from Korat