### PERSONAL ACCOUNT BOOKS

No. 2044

Available Rulings
JOURNAL
CASH
S. E. LEDGER
RECORD
D. E. LEDGER

144 PAGES

U. S. A.
December 1973

Trip to Mexico

to collect specimens

for chemical analysis

and voucher for

Mexicanusage study

Thomas A. Zanoni

# 2561 A to 2855
What is origin of seed coat of Pinon + Juniper

Tree 2654 does not have # in sac (= J. contamin)
SALT 1 = 2577
6 December 1923

2561A J. monosperma male
2561B J. monosperma female

5 miles S of I25
at US 84 (road to)
Santa Rosa, New Mexico.

Male pre-anthesis
female - corn, bluish bloom, chalky
cone shape base

in Pinon - Juniper over grass, pasture.
Dec. 1977  
2562  
J. pinchotii  Sudw

on by-pass Road, 
1 mile S of US 285, at 
Carlsbad, New Mexico.

Creosote, Art. Mahogany, 
Yucca, 
Juncus spinichotii

limestone soil

small bush, 3 ft. tall

fruit - rose brown, few bloom 
Pulp - sweet, soft, fleshy

collected animal pellets 
corns, droppings, some on ground,
8 December, 1973
South of Rt. 67+90, Alpine, Texas

on Route 118, road to
Big Bend National Park,
Brewster Co., Texas.

Juniperus erythrocarpa
6.7 miles S of Rt. 67-90
many trees, very large pop,
over many acres
Junipers come for 2/3 mile, along road
with Bouteloua gracilis and
Bouteloua curtipendula
Rhus
Opuntia (cholla type)

Site very similar to
Topography and Vegetation
To Chihuahua sides of
J. erythrocarpa

male cones pre-Anthesis
female cones dropping
8 Dec. 1973

J. erythrocarpa
9.4 miles S of Alpine female tree 20 feet tall by roadside

no whips / ripe cones
rose pink / green cones - few ripe ones

2564
Bouteloua's / Andropogons, on Volcanic Rocks
J. erythrocarpa
same site as 2563
male tree, cones very pre-anthesis
15 ft tall

2565
J. erythrocarpa
female tree, same site as 2563
ripe cone pink color, bloomed
few cones
Good terminal whips

RFA said fewer cones are present than in 1970

Slide: first three Roll 1
8 December
2566  J. pinchotii
Comm
2\frac{1}{2} - 3 ft. tall, small shrub
no bloom on cones, cones falling
\frac{3}{4} mi. off Road, to Chisos Basin, Big Bend Nat'l PK, Brewster Co., Texas.
Yucca, Opuntia, Acacia, Ephedra,
4800 ft.
local males are pre-anthesis
8 Dec 1973

Chisos Basin Camp
Big Bend Natl Park,
Brewster Co., Texas,

2567

J. erythrocera
near Mens Room
(Eside of basin)
at Chisos Basin Camp 5400 ft

bloom on cones, 5 ft x 8 ft wide

with J. pinchotii, J. degsyman
J. fraccida, Ager
Bouteloua gracilis, D. cortぎde
Chrysothamnos, Andropogon
Dasyhein

2568

J. pinchotii
5 ft x 5 ft
No bloom on cones
mostly J. pinchotii in area
live oaks

Bark similar to J. monogynus
J. erythrocarpa
8 ft. Tall x 10 ft. wide
Cone with bloom

J. erythrocarpa
20 ft. x 20 ft.
Cones with bloom
Branches at base

Pellets collected near
Cabins on bottom of Basin,
contain juniper seeds
8 Dec. 1973
2572-2574
Behind cabins, up slope (SE) from Basin Camp, near Supply garage 5800 ft.

Eucalyptus or Eucalypts
J. falcata
J. deppeana
J. c-reacta
Pinus (smooth/leather)
Pinus ponderosa
Few grasses underneath

2572
J. falcata
Female, next to garage
6" dbh, x 18 ft tall
Few green cones, with sea foam green, foliage very drooping
Bark - Grey, cinnamon underneath

2573
J. deppeana
8" dbh, 15 ft tall,
Thin Black Bark
Cones small, green with
Sea foam green bloom

2574
J. falcata var. falcata male
Male
8" dbh x 18 ft tall
Flaccid Branches
8 Dec. 2575

Male J. deppeana

4.7 miles Road to Chisos Basin Camp, from road to Panther Jct., Big Bend Nat'l Park, Brewster Co, Texas

Evergreen Oak, Red Oak, Piñon (Pinus cembroides), J. dep, J. flac, J. pindotii

5" dbh x 15 ft tall. Male cones much prior to anthesis
2976. **Jerythrocarpa**

at Km 317 on Rt. 54 (km N of Guadalajara) on E side of road edge being 3.5 miles S of Agua Nueva (N of Est. Carneros)

Males pollinating now
Female cones past maturity
Female cones dried out now

with Opuntia, Clematis, Acacia
Yucca spp., Mahonia (trifoliata)
Compositae, Polemoniaceae,
Grasses
Gravelly, dry 6500 ft.

2 males, 1 female

2 ft. x 2 ft. shrubs
10 December 1973

SALT 1. J. Saltillensis

Yucca spp., Ephedra, evergreen oak, Boutilous, Mahonia trifoliate
spiroideae shrub

2577

voucher, photos

J. saltillensis

15 ft. wide x 8 ft. tall
Branch tip hooked, back side,
yellow green foliage
Powder blue cone bloom

soft fleshy sweet berries

gravelly soil, on hills

very common on slopes on E side of road

1.9 mi N of Rt. 54 on
dirt trail opposite
three three cars in
middle of row of cars
used as houses at
Fos 4 Asphalto El Malmut
J. saltillensis

with straight tips

6.100 ft.

0.8 mi. off Rt. 54, at

same dirt trail as 2577

single plant near trail
10 Dec. 1973

2579

(Photo, CORED)

_J. saltilliensis_

12" dbh x 25 ft. tall,
Pre-anthesis - male tree
Bark - laced, grey-white

8.6 miles from Rt. 57 on
Road to Los Lirios & El Tunal
- E side of Road, up dry gulch
100 ft. from Road

2580

(next to 2579 tree)

_J. saltilliensis_

Male, pre-anthesis
With _Phoradendron_
8" dbh x 15 ft. tall

2579 & 2580 with pinyon
and thick undergrowth of
_J. saltilliensis_
MISTLETOE - very thick and
Damaging to _J. saltilliensis_

_J. saltilliensis_ very common
for several miles along
Roadway
- heartwood RED
10 Dec. 1973
2581 J. depeana depeana
(see 2579 side)
CHEM, MORPH, PHOTO
7600 FT.
Bark similar to J. patagonica

OAKS spp., Piñon, Yucca spp., Arbutus,
J. saltillensis, J. erythrocampa,
at Gulch bottom & up slope
on E side of road

male cones, small, immature
J. depeana scattered in Piñon woods,
very common throughout woods
in understory, with
a few J. salti & a few
J. ery.

(site is N of Casa BLANCA
farm.)

Nearby J. depeana
are single stemmed,
short stature in
fields & woods.
10 Dec. 1973
2582

MORH & CHEM.

J. ERYTHROCARPA?

7600 FT.

2 FT. x 2 FT.
BRANCHED AT BASE
BARK GREY, STRIPS TO LACED BARK
NO BLOOM ON CONES, LEATHER BROWN CONES IN WOODS WITH J. Degpeary (2581)

branch tips curved somewhat
uncommon (one?) to rare?
seeds protrude

6.5 miles from Rt. 57 on road to los lindos

(J. pinchotii?)
10 Dec 1973

2583 Pellets at 0.6 mi. from Rt. 57 on road to Los Lirios (6.8 mi. SSW of Artega)

J. saltillensis (very common) and J. erythrocappara (abundant) and Pinon.

2583 Discarded 15 April 1975 72

16 Dec 1973

2584 J. erythrocappara

MORH Chem

7200 FT.

near km 230
near high Pass on Rt. 57
7.6 miles SSW of ARTEGA, Calif.
in Pinion woods with

J. erythrocappara very common
undesirable shrub with

Mahonia glandulosa, Rhus sp,
thecium grass, Agave,
Bouteloua grass, Sider,"

two J. saltillensis

8 ft x 8 ft. Bark Shredded greyish
Core ripe, bloom present, few in
Multi-stemmed at base
Core pulp soft, fleshly, sweet, juicy,

Ripe Pink

ERY 57

CULT

ARISTIDA
11 Dec 1973

2585, 2586  Juniperus monogyna

C, M, P = MLT type

on W side of Rte. 77

1.0 mi SE, N of

just south of La Trinidad.

Site is 16.5 mi N of
San Roberto Junction,

Nuevo Leon

Trees 20ft x 20" dbh

very common as tree
cover grassland which is
down pasture

little reproduction beneath

present trees,

Cones with bloom, seeds present

6400 ft

soil-silty

male pre-anthesis
11 Dec 1973

Jup cries (MLT type) at km 70 north of MATEHUALA, SLP on RT. 52, near Santa Rita

Jup cries very common, arborescent in LARREA - OPUNTIA - YUCCA FOREST
11 Dec. 1972  G Mf

Juniperus flaccida var. flaccida
(male)

2587  FLAC NL

14.1 miles E of Est. San Roberto
on Rt. 60 (Road to Linares);
At San Marcos, Galana, NL

Male preanthesis
with Tillandsia
18 ft x 12" dbh

\[ \frac{1}{2} \text{ ft.} \]

with Mahonia trifoliata
Compositae, Agave
Otophyta, oaks,
few grasses

Pressed & dried specimen
through Dec. 10
11 Dec. 1973

**J. monticola compacta**

East side of Cerro Potosí, 12,000 ft., Galeana, Nueva León

in *Pinus culminicola* thickets

with *Euphorbia*, *Sedum* and a few herbs.

grey, weathered limestone

MCP

1/2 ft. tall x 2 ft. wide
Branched, shrubby plant
Few female cones, green

Most plants with no cones.

*J. monticola* is common understory shrub under shrubby *Pinus culminicola*

2588 - 2598

Same site as above 2588-2598

*M. culminicola*

3 ft. tall x 15 ft. wide
5 inches DBH

Seeds dispersing, cones open
11 Dec 1973

2. The Jimontarola on Cerro Potosí is in the form of very small plants, to 1 to 1.5 feet diameter.

The drive from Galeana to the Microwave station on Cerro Potosí is 34 hr. ride.

Ride from base of Cerro Potosí to Microwave station is 21 km long.
12 Dec. 1973

T. monosperma var. gracilis
5900 ft.

Few female cones present, bloom
male cones present, yellow
male cones are corn gold color

28.4 miles N of Dr. Arellano,
on road to Galeana,
Nuevo Leon, Mexico.

J. monog. is very common as multi-branched shrub in
limestone soils, East-facing
slope
with Yucca, Dasyliichium,
Opuntia, Agave, Rhus, Mahonia
in grassy area with
Thorny shrubs on West
side of Road,

Many of the jumpees have
long terminal whips.

2601 3 ft tall x 4 ft wide. 2" dbh. Multibranched at base.

2602 7 ft tall x 7 ft wide. 2" dbh. Multibranched at base.

2603 5 ft tall x 5 ft wide. 1" dbh. Multibranched at base.

2604 3 ft tall x 1 ft wide. 2" dbh. Small branches at base. Corx darker than others.

2605 4 ft tall x 5 ft wide. 1 1/2" dbh. Multibranched at base. Few whips. Few cones.
12 Dec 1973

2606 7 ft tall x 10 ft wide x 2" d.b.h
    multi-branched at base
    Male

2607 4 ft tall x 5 ft wide x 1'6" d.b.h
    multi-branched at base

2608 5 ft tall x 10 ft wide x 2" d.b.h
    multi-branched at base

2609 MCP  Male - Antillean
    6 ft tall x 10 ft wide x 2'6" d.b.h
    multi-branched at base
Friday
14 Dec 1973

I. monticola compacta

4.5 miles N of Paso de Cortes, Parque Nacional Izta-Popo, Estado de Mexico (on road to Iztaccihuatl)

11 600 FT.

- on bare volcanic rock outcrops at timberline near Pinus hartwegii in Zacatate or Calamagrostis and Festuca
- scattered on rock outcrops often on steep rocky slopes on W side of road

Taller foliage often with reddish tinge
Small (10/12 ft) sprawling shrub
14 Dec 1973

2610  

½ ft tall x ¾ ft wide  
Multi-branch at base  
Female cons- green w/ lt. green bloom

2611  

½ ft tall x ¾ ft wide  
Multi-branch at base  
Female cons- root ripe = green + lt. bloom  
Ripe = army green + light brown

2612  

All male cons still present on plot  
3 ft wide x 1½ ft tall  
Multi-branch at base

2613  

¾ ft tall x 3 ft wide  
Multi-branch near base  
Glands ruptured, long term 
Glands  
No Q or O Cons

2614  

1 ft tall x 4 ft wide  
Multi-branch at base  
Cons green  
Sticky foliage
2615 ½ ft. tall x 1 ft. wide
Morph only. Multi branched at base.
Juvenile Growth
No stems.

2616 1½ ft. tall x 2 ft. wide
Multi branched at base.
Green crows.

2617 1 ft. tall x 3 ft. wide
Multi branched at base.
Green crows.

2618 ½ ft. tall x 3 ft. wide
Small branched at base.
Old male crow still intact.
14 Dec 1973

I. diplocaul var. diplocaul
8.7 miles E of Rio Frio,
in the State of Puebla,
near Km 7.6 on old Rt. 190.

Edge of cornfield with
weeds on N side at road
in limestone soils

Local junipers in
line to oak - juniper woods
(also at Ronte del Emperador
at 8.2 miles E of Rio Frio)

Tillandsia grows on I. diplocaul

6 ft males beardless

4 cones green (seafoam) with
a light bloom.

Beak is thin, few bracts
in crown give less dense
crown

often 1st terminal whip

Strong saproot for cutdown tree
Some reproduced noticed
2619  12" dbh x 25 ft tall

MPC  Q  cone brown, small green thin check. Back single stem

2620  Branched at base 25 ft tall, 8" dbh

  Q  Fi. green light thin check back

2621  30 ft tall, 18" dbh

  Q  Single stem

  Fi. green light thin green check back

2622  20 ft x 8" dbh

  Q  Fi. green light check back single stem

2623  15 ft x 5" dbh

  Q  Few cones, green sparsely marked crown thin check back single stem

2624  20 ft tall x 8" dbh

  Q  Fi. cones green single stem
2625 20ft tall x 8', DBH
Single stem
thin check back
Cross silk
Long Term Whip

This site (2819-2625)
15 Dec 1973

2626 (Adams photos)
J-deppearra deppeara

on Toll Road Rt. 150,
3/4 mi. E of Amozoc, Puebla
Exit and toll booth

along streams + up hills
scattered
8" dbh x 25 ft. Tall
& cones green.
15 Dec 1978
26274-2636
T. monticola f. orizabensis
(10 trees)

Pico de Orizaba, Puebla
at shoulder known
locally as MACPAISERA

SW facing slope 12700 ft
on BARE VOLCANIC ROCK
little or no other vegetation
on these bare Rocks, but
with Pines.

Nearby vegetation scattered
in Rock crevices includes
Ribes, Gnaphalium, Composites
Grasses.

Junipers - single stems that
branch slowly above base // low-spreaders,
sprawling shrubs.
Several plants have very
long branches (0.4 x 3 ft. 6 in)

Make in anthesis, and
post antheces

Junipers common on this location
at edge of Timberline

Route to Pico de Orizaba

Pt. 150 to Cd. Serdan Exit N to Cd. Serdan (Rt. 144) E to San Martin Ojo de Agua on dirt road thru Conutlalcingo.

Up W side of Orizaba on dirt road.

Hike about 2000 ft. up peak to Timberline.
15 Dec. 1973

J. degenera degener was observed in Volcanic, silty soils S of A. Serdan on Rt. 144 at 3 miles S of Serdon to 8 miles S of Serdan in fields ad in Oak woods and in Opuntia - Agave - Yucca fields.

Some trees very old single stemmed & short, thin checkered bark.
15 December 1943
2637 to 2643 (7 trees)

J. flaccida var. Poblana 3

3/4 mi. N of Aranzon, Puebla
don Road (Map. R.150) to
Puebla, Puebla.

Comm. in area of houses on
W side of road. Disturbed
areas AT edge of road and
along deep Arroyo.

Locally common in corn fields,
and edges or settlements.

Trees to 12-15" d.b.h., to 20 ft. tall.

Of Pre-Antehis

Galls green with light coat
of bloom.
17 December 1973

Observations

J. Gamboa observed

at Flores Magón, Chihuahua at
7400 ft. descends to
5600 ft. elev. at Teopisca
area.

J. gamboa has a broadly
conic crown.

This species is used as
Christmas trees near
Teopisca, Chihuahua.

Soil near NW edge in 
Alto is Red Soil
5E and grade (near Comitan)
for rocky, brown soil

J. Gamboa is seen on
shoulders or road as tiny
short, ckt-oven plants,
may stump Sproor
2444 ft (1042 m)  
2653 ft (808 m)  

Jungens Standleys  
el. 10300 ft.

About 16 miles North of the Town Plaza of Huehuetenango, Guatemala on RN 9 N (road) to San Juan Ixcoy.

(Area has frost this morning)

0 cobs Zyes? of cobs present. Large cobs are foam green.

0 anthus & post anthus  
(a few cobs are preanthus)

Rocky Crest on Mesa, Soil Rocky with Grasses, Composites, Eryngium, Agaves (Cultivated)
2644 20' part anthers
12" dbh x 30 ft, single stem

2645 12" dbh x 15 ft, single stem

2646 18" dbh x 25 ft, single stem
nature must be tested

2647 12" dbh x 20 ft
branched above base into 2 stems

2648 18" dbh x 20 ft, single stem

2649 15" dbh x 15 ft, single stem

2650 18" dbh x 20 ft, single stem

2651 12" dbh x 15 ft, single stem

2652 24" dbh x 30 ft, single stem

2653 18" dbh x 20 ft
stem divided into 2 just above base
J. standleyi was planted at "white house" at 8500 ft. els. approx. 8-9 miles from the hide tags.
18 Dec, 1973

2654-2653 (10 sets)

J. Comitana
12 miles E of Rt. 190, on Route 17 (The Road to Montebello).
Muni., La Comitana, Chicago

"Cipres" Local name

Alt. 5750 ft.
Low moist basin on side of Rt.
J. Comitana, Ficus trees,
Acacia
Grasses, Composites

Bromelials, orchids, mosses
& Lichen seen on Juniper

2nd Covers slight bloom,
Many new ferns are just past
Fertilization stage.
Most mature canes are green.
Old dry canes are bright red

2nd pre, Anth, Post anthosis

Many seedlings were seen in this field, that is not now grazed
trees to 24" dbh x 35 ft.
Single stemmed, usually
laterally branching to 2 or 3 ft
above base
Crown - broadly conic
Bark - LACED STRIPS 4 to 5 ft

Twigs with little odor or disease

2654 0° PGEANTHERA 12" dbh x 20 ft
Single stem

2655 to 2663 ♀ female tree
18 Dec 1973

J. gambosa

2664-2673

(10m)
more El Membrijo
9 miles N of Constan, Chungo,
on Rt. 190.
6400 ft.

NE side of Road in Pine-oak
Forest Clearing, over
Grassy Area.
Sort = Small Rocks w/red soil

3 much prior to anthesis,
still small yet

0 green, mostly fern clad
(i.e., grass),
fruit but very common

Trees usually single stems
sometimes multiple trunks
Bark - grey black, alligator
Like to 24" dbh x 30 ft tall
J. Gamboa is come as
undertaker & part of oversey
in Pine oak woods from
San Cristobal to Comitan,
Chapar.
19 Dec. 1979

F. flaccida var. pfeilii
near San Dionisio, Ocotepetl
in RT 190, SE 29 OAX, OAX
6000 ft elb.
Along N side of road in
disturbed weedy, grassy areas
with Acacia, Pteleostemon,
OAKS, sheared cultivated
AGAVE + CORN + FIELDS

Juncos scattered along
hills, often with oak
these areas probably disturbed
areas too.
Soil = fine sand, rocky
with
CONE yellow green with
light coat of bloom
& much pecc (inc.) to native to almost all.
Tree bracts not flaccid at all, large distichous fans.
Crowns are round balls
BARK INTERLACED, light grey and
STEM = multistems above siltstone base.
Terminal whips are mostly eect
Trees 8-10" d.b.h. x 15-20 ft tall
19 Dec 1973

J. Flaccida Flaccida
(7 Trees)

2682 to 2688

1.3 miles E of Morelos, OAX
on Rt. 190
7,700 ft amsl.

Rocky slopes on N side of
Road,
on N & S facing slopes,
with junipers comm with
leaves very below.

Q 4

+ 4 w/ large, green w/ light coat
of bloom. Many
dead or lies. 0

Branches - Flaccid
Bark - laced, grey-blue

Q

Pre - action

Soil - soft, crumbly white
weathered Limestone

trees to 12" dbh x 15 - 27 tall
multi-branched above base
Mary old & gone seen below
21 December 1973

*J.* floridana floridana

2689-2692 0.6 miles W of HUASCA, Hgo. (north) (on road from Rt. 105 to HUASCA)

Assoc.: Acacia, Agave, J. impressa bigger, J. floridana

On pre + post anthesis

9 few cones, green with light bloom

Single stemmed to 25 ft tall

Salt Red

2693, 2694, 2695 = same
2.2 miles W of HUASCA on same road

Red soil

In OAK-PINE area, at edge of arroyos from field
fruit common, green with light bloom or post anthesis

5900 ft
21 Dec 1973

2696-2702 (7th)

J. deppeana deppea

0.2 miles N of the
El Chivo turnoff on Rt. 105
(wl. = 6.5 miles N of
Monument Plaza in
Town of Etchivon) Hidalgo

J. deppeana + J. monticola

J. deppeana is major overspreading
tree in juniper
thicket
trees to 10 "dbh x 15 ft tall

Trees mostly multiple stemmed
at ground level.

Soil: light, crumbly

→ 7600 ft.

2703 (1st)

J. monticola monticola

Same site as 2696-2702

Single stem that branches
just above ground, equally short
21 Dec 1973

J. monticola monticola

2704-2711

(8 lines)

½ mile off Rt. 105 on road to El Chico, Hidalgo (road is 6.3 mi. N of Plaza w/ monument in Pachuca, Hidalgo)

7600 ft.

in Oak-woods and in clearings, with Agave, J. deppeana, J. monticola monticola, Abies (Fir) woods nearby.

Stems - branched above ground & spreading

Ø Pest Anthesis

Ø + Small, tiny ones. ø + Large old ones green yet with light coat of bloom.
22 Dec 1973

2712 to 2718 (9 seas)

J. monticola f. monticola

1.1 mile W of TAN Toco, D.F.
more Km 32 on
Pt. 15, West of Mexico City
AT summit of road
at about 11,000 ft. alt.

+ In Abies forest with
Rosa, Rubus, Rubus and
J. monticola

+ As understory plant
branched above base,
and Shabby, to Single
STEM 8-10" dbh. + 20-25' tall

Can mostly part another
of c/w comm. / green, slight
bloom.

Jasmin very common
at this site and side of
road in shrubs, etc.
in cedars along powerline
rightly way.

Also JUNIPERUS on S side of Hwy.
J. monticola compacta

NE slope of Nevado de Toluca, Mexico, 12,300 ft. (site is beyond weather station on road to craters).

Above timberline on bare volcanic rock outcrops with grasses, composites 15-20 junipers at near this site, which appears to be only site of Junipers 1” stems x 1/2 ft. tall prostrate, spreading, forming mats on rocks stems branched above base

GUS old= leather brown newer = green with light bloom newest tiny crowns

Many & cars present (green bag)
Pears: much past anthras. Some junipers show die-back.
22 Dec 1973

Observation

T. flaccida flaccida was seen 8 miles S of Toluca on road to Sulitepec (or Nevado de Toluca)

Uncommon along stream banks at edge of grassland-pasture

foliage-bracts dropping

23 Dec 1973

A chihuahuan cactus seen in a house in Talpa, Zacatecas

May be Tunjia cactaceae?
24 December 1973

2226-2735

Juniperus deppeana v. Zacateae

9.6 miles NW of Sib就是te, Ft.
on Rt. 45.
7000 ft. elevation

Sw side of road in pasture.
9 quarts, acacia and
J. deppeana Zacatea.

Scattered & becoming common
on rolling hills.

Shrubby to 15 ft. tall x 10" DBH
Multi-branched above base. to
Single stem.

Bark - light thin checkered.
grey-black

I saw green with heavy white bloom
May large cones present.
O? Pseanthus

2726 in O with last year O. 1973 O

Bark

Printed
old one(s) on trees are
trunk brown with little
bloom.

1. dappled yacateses is
very common farther nw
in Oct. 45—being dominant
overstory plant.

Sokts reddish to gray, with
small water-adone
area—limestone rock
is exposed on surface.
24 Dec. 1973
2736-2740

*depppeana* Zacatensis

14.7 mi. N.W. of Sombrerete, Zacatecas, on Rt. 45, near OJO de AGUA

Pinon-Juniper woodland over Limestone with Yucca, Opuntia, Acacia, composites, grasses. 7000 FT ele.

Bark: Thin, light flaky cheeks. Lt. Gray. Stems to 12 in. 10 dbh + 15 FT. 1 core green, few heavy white bloom

♂ most are much past anther, a few are pre-anthecious
newest ♀ are past fertile stage and are becoming large.

Some Junipers are single stems at this site
Observation

A line fungus species, *Robusta*, is used as a cluster tree at SAG Forestry Inspector Station on P1. 40, just W of El Salto, DGO.
25 Dec 1923
2741 2742
2743 2744
2745 2746
2747 2748
2749 2750
2751

J. durangensis

2752
2753
2754

J. patagonian

J. degprehe Palmen

(Bulk here is only 2752)

= DEP PAT BULK

J. degpehan var. robusta

near Km. 152 on Rt. 40, W of Durazgo, Dgo.
AT Puerto Buenos Aires
(approx 30 mi. W of El Salto, Dgo)
9200 ft. (2740 meters from fossil site)

Sits
STREAM

Boulders

Boke

Boulder

Pro. Buenos Aires

K. 151

Buenos Aires

Join
Jugan durangena / leggion
patoman ad J. leggion
habita in Pine-oak-
Juniper woods with
Aristoaphytes shrubs on
Red Rocks a Road Stream
off Highway.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>15&quot; dbh x</td>
<td>8&quot; dbh x</td>
<td>18&quot; v 25 ft.</td>
</tr>
<tr>
<td></td>
<td>15 FT.</td>
<td>15 FT.</td>
<td>st/50en.</td>
</tr>
<tr>
<td>Gender</td>
<td>Contorted</td>
<td>Contorted</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>many green</td>
<td>none on</td>
<td>few green</td>
</tr>
<tr>
<td>Old</td>
<td>?</td>
<td>?</td>
<td>leather brown</td>
</tr>
<tr>
<td>Size</td>
<td>15&quot; dbh x</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td></td>
<td>15 FT.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Habit</td>
<td>shrub to</td>
<td>single stem</td>
<td>single stem tree</td>
</tr>
<tr>
<td></td>
<td>single stem</td>
<td>almost</td>
<td>tree</td>
</tr>
<tr>
<td>Branch</td>
<td>curled</td>
<td>straight</td>
<td>straight</td>
</tr>
<tr>
<td>Tips</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bark</td>
<td>local scaly</td>
<td>asbestos shrub</td>
<td>cherted</td>
</tr>
<tr>
<td></td>
<td>interlaced</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
26 Dec. 1973

OBSERVATIONS

J. deppeana var. robusta was seen at 7,600 to 9,200 ft
elev. on Pt. 40, (Dgo. Magall.)

Localities with this species included:

Ojo de Agua
La Palmita
El Soldado
Santa Barbara
TEPALCATE
NAVIOS
Cruz de Piedras
Estacion Microondas El Tecuan
Llano GRANDE
El Madroño
Hacienda Coyotes
El Salto
NAVAJAS
Las Cumbres
Los NEGROS
Estacion Microondas Las RUSIAS
Lechería
Las Adjuntas
La Ciudad
Buenos Aires
J. deppeana var. Robusta

between Km. 66 and 68, W of Durango, DGo. on Rt. 40 (to Mazatlan)

Pine-oak- Arctostaphylos - Juniper woods open
Grasses -
Very Common Juniper in Pine Forest

9 large fr. green with light yellow, many press
8 Pre anthers

Soil Rocky (limestone?) mixed with quartz

Photo 2755 is not spec. 2755 but spec. 2757.

2755 0 18” dbh x 20’
Single trees
26 Dec 1973

J. deppeana var. patomina

3.6 miles South of the Town Square of El Salto, DGo, on road to Pueblo Nuevo, DGo.

On East side of Ravine wall, next to rock in Tall Pines Forest

Only juniper tree of this Taxon observed

with J. deppea var. robusta

Very old tree, aged 600. Sparsely foliated, few female fruits

30-40 ft x 3 ft d.b.h.
2765 J. Patoniana
2766-2770 J. blancodi = Toscano

On Island in Stream at bottom of ARROYO SAN ANTONIO, side is 3.2 mi S of Town Square on El Salto, DGv.

J. blancodi to 8' dbh x 15 ft. contour
mostly sheathy
cover = blue-black sapsap, Htbl,
 July = green, few seeds

with J. degenerana robusta
J. degenerana Patmciov,
J. dehancor, Pinus lutea
Pinus leucodonta, Pinus ayacahuite,
Pinus teocote, Pinus durgagni
Cypress blanc (with)

only 6-8 shrubby J. blancodi
26 Dec 1973

OBSERVATION

company Wanderer de Dunn
has cut J. Robinson
for lumber & cultivate
it in nursery
5 of El Salto (12 yr old)

Daniel Reyes showed us
the Vivellas de J. Cej Madevera
de Dunn. J. Dropped
Robusta in this bott. land
site (bott. Dunn along old
flood plain) 3-4" dbh x 15 ft tall.
12 yr. old. Reyes
thinks that this rich soil
site does not produce
"good" trees as the wind
site. that are shorter, etc.
26 Dec 1973
2971
3975
2775
Arrayo de Las Adjuntas, 1/2 mi.-2miles, N67
tour of Las Adjuntas (or Río) Durango, (12km of El Salto)
in Pine woods with
J.D.W., robust

10 20" dbh x 20 ft tall
single stem tree / BAB
mostly BAB shrubs 2-3 ft tall
green fruit, only 29 there 5 harfs.
8800 - 9000 ft.

Scattered to near as bottom
9 moist argil soil
Arrayo de Las Adjuntas,
9 con purplish black lit brnn
dry green judging
con pre cutters
It appears for today's collection that I believe may be scattered.
From various corners.
for red pepper.
Barney this right held.
It goes.
2726 - (blue + buck)
2783 - JOYTHROCARPUS

c.6 miles S of La Zarca Junct. (Rt. 45 & 30). Durango

In Bouteloua grassland with Mahonia trifoliata and Acacia.

Scattered in this area, more common to North and to West. A few occasional plants seen on Rt. 30 (E to Torreon)

Used for fence posts locally, called "TASCATE"

Only one old core seen on plants collected; no evidence of new clones

A. ANTHEIS

27 Dec. 1923
2784 ft (7 trees)
2790 Juniperus flaccida flaccida

13.8 miles East of San Roberto,
Nuevo Leon. On Rt. 60 toward
"San Marcos Site"

OAK - Piñon - Opuntia - AGAVE
- Bouteloua - Jp. flaccida

TILLANDSIA in TREES of J: Flac.
15 to 20 Junipers at This
SITE - N facing arroyo
slope

3 Premnae.
4 Glen

Branches, foliage flaccid.
Soils - St Brown, rocky

SAME SITE AS Buck
Collection of This Trip
2791 - (2 trees)
J. altissimia

11.8 miles East of San Roberto, N.L. (on Rt. 60 to Linares)

CaCO3

On Cyprian soils in fields or Bouteloua rjp. mono-
year grass.

9 blue black surface with light bloom. Maturing
ready to fall. Sweet pulp.

O Pre-anthers

Very common an overstory
in grassland and
understory in Pinon.
MLT seen at 1513 N of San Roberto, NL.

La Trinidad, NL
San Fernando, NL (24.76 N)
La Rosa, NL
Navidad, NL
Providencia, NL
2798 - 5 samples
2802 "MLT" = Monoxen species

14.7 North of San Robertson,
Nuevo Leon, near Tampico
La Trinidad 6,300 ft.

Oak trees in grassland with boulders
up to 20 ft x 21 ft x 23 ft, on western
side y Santa Madera-Ototoes

Rose color, with bloom
Moderate number of cones

Pre anthose
Stars multicolored aster to single stars
Bark light grey interlaced
28 Dec 1973

2803-2813

(10 Trees)

**J. Erythrocarpa?**

Near Last Pass in mountains, S of Saltillo.

1.3 mi. S of Los Lirios
Turnoff on Rt. 57, Coah. 7100 ft.

in Piñon-Juniper woods
as understory shrub under
piñon. Very common
in Region on

Agave, oak, also Mahonia
glyptophylla, Juniperus saltatrix, Acacia

SAME SITE AS BULK #2584
28 Dec 1973

2814 - 2821 = Salt-
2822 - 2824 = ERY

J. Saltilens
J. Ery
(LLR + MGB's)

500 pt.

AT Los Lirios Spit on Rt. 57, S of Saltillas.

<table>
<thead>
<tr>
<th>Saltillensis</th>
<th>LLR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abundance</td>
<td>Occasional</td>
</tr>
<tr>
<td>Bark</td>
<td>Shreddy, white</td>
</tr>
<tr>
<td>Color</td>
<td>Large, white</td>
</tr>
<tr>
<td>Texture</td>
<td>Lt. bloom</td>
</tr>
<tr>
<td>Surface</td>
<td>Rose?</td>
</tr>
<tr>
<td>Pulp</td>
<td>Pulp?</td>
</tr>
<tr>
<td>Flowers</td>
<td>Few flowers</td>
</tr>
<tr>
<td>Fruits</td>
<td>Many unplat</td>
</tr>
<tr>
<td>Pre-darthritis</td>
<td></td>
</tr>
</tbody>
</table>

Mammal feces with J. saltillensis seed, see at this site.

NMB-LLR is seen on opposite side of road along fence evidently due to BLM digging.
2825-2831 (7 hrs)

J. dippeana dippeana

8.7 miles from Rt. 57 at road to Los Lirios, Coch (Buck #258 boundary)

Los Lirios exit is 5 or the 4th Rio Chorro bridge on Rt. 57

in Piñon-Juniper oak Woods, with J. erythrocarp over grasses
29 Dec 1973

Searched for J. Saltiller at Aquiles Serdan, Chih, did not see any Juniper Saltillen. No Baldaks look suitable for those. Perhaps Muñoz got his notebook mixed up and collected the spur's somewhere else.
2832- (7 hrs )  30 Dec 1973
2838  J. Degleran Robuste

10.6 mls W of Cuauhtemoc, Aft Town Square, near the Poblado or Casa Colorado, on Rt. 16, South Side of Road
ON N Facing Slope, Redy Story
W/ Piñon = Evergreen - Jp. degleran robusta Woods
Little groundcover
Common as wind-orient. For usually single sheltered in Woods

♀ Green, light bloom
Olders are red brow

♂ Pantheosis
To 20 ft tall x 15^-20^" dbh
Single stemmed, no woods
Some older plants are multi branched at just above ground level
most flowers have seeds
protruding.

 Bark — grey, thin, scaly, chester.

 Jup's are more common at bottom of this place.
28 39 - (It is)  

30 Dec 1973

28 45

*Tempura* cythocarpa

5.7 miles E of the town square in Cauktemeb, Chile, on Rt. 16, near Santa Lucia.

Very common in rolling hills grassland with occasional dry shrubs. Area used as pastures.

& fresh ones large, mature rose, soft flesh, sweet pulp *et. al.*

And 9 on ground tree to a lt. orange color are sprinkled with old, wrinkly, cover full of small yellow petals.

& your father
Shrub Multiflora at and above base

Some female cones appear to be squashed while still on bushes - Bird damage?

Bark Laced, Lt gray
to 2" diameter x 5 ft tall

It looks like these are J. Argenturus v. the plats. of Ces Tiers are not so dense.
18 January, 1979

J. Gonzales

Exit 4 to Starkville,
South Trinidad Glendo,
Las Animas County
(1 1/2 miles N of New Mexico State Line)
on NE side of junction
I-25, near truck weighing
Station, approx. 6400-6500 ft el.

Rocky soil with Pinion, Oak,
Rhus triplobata, Chrysothamnus,
in Pinion-Juniper woodland
on W facing slope,
very dense tree growth.

Stems multi-branched at base, to 15 ft;
bark: interlaced strips
Whips: erect

O' preanthem (very pre-)

O' spike longer, more chalky
blue-black appeared through

Buds eaten by juniper beetles
Today, in Snow.
Trees snow covered.
CETENAL
Comisión de estudios del Territorio Nacional
16 de Julio Insurgentes Sur
México, DF

mar.

map.
Climate
Topography
Geography
Baja del Svelo
Edaphol
Uso potencial
I don't know.

And from TAPA to TRALTENGO in Pine, one word, 18 FT. tall.