

DESCRIPTION OF A COLLECTING TRIP IN PERU, ECUADOR, COLOMBIA ANDVENEZUELA

by

A.S.H. BREURE

(Leiden)

Introduction.

In the course of my work on neotropical land snails I recently had the opportunity to make an extensive collecting trip through various countries in South America. The main purpose was to obtain living specimens of Bulimulidae and to preserve them in buffered formalin. However, all land snails found were collected, and in case of living specimens preserved in Ca-formalin. The material has been deposited in the collection of the Rijksmuseum van Natuurlijke Historie, Leiden.

During the journey I also made ecological observations and gathered data on the distribution of the species.

Acknowledgements.

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Itinerary.

I. PERU (January, 22 - April, 6, 1975)

January 22-February 4: Lima

January 25: excursion in Río Rimac valley; February 1: excursion to Río Santa Eulalia valley; 2: collecting trip to Río Chillón valley.

February 5-7: Río Cañete valley

5: Lima-Yauyos; 6: collected in environs of Laraos; 7: Yauyos-Ica.

February 8-9: Ica-Tacna

8: collected in loma-vegetation near Atiquipa and Atico.

February 10-11: environs Tacna and returned to Arequipa

10: excursion to Tarata and environs.

February 12: Arequipa-Juliaca

February 13: excursions in environs of Lago Titicaca

February 14: Juliaca-Cuzco

February 15-24: Cuzco and environs

15: excursion to Río Urubamba valley; 16: to Río Vilcanota valley; 17-18: excursion to environs of Quillabamba; 19: collected in Río Vilcanota valley; 20: collecting trip to region south of Cuzco; 21-22: excursion to Kosñipata and region of Paucartambo; 23: trip to environs of Paruro.

February 25: Cuzco-Abancay

February 26-28: Andahuaylas and environs

26: Abancay-Andahuaylas; 27: excursion to Río Pincos valley

February 28-March 1: Andahuaylas-Ayacucho

March 2-3: Ayacucho-Huancayo (via Huancavelica)

March 4-5: Huancayo

March 6-7: Huancayo-San Ramón (via Tarma)

March 8-10: San Ramón and environs

8: collecting trip to Mina Pichita Caluga; 9: to environs of La Merced; 10: excursion to Oxapampa.

March 11: San Ramón-Junín

March 12: Via western side of Lago de Junín to Cerro de Pasco

March 13-14: Cerro de Pasco-Tingo Maria

March 15-22: Tingo Maria and environs

15: excursion to Boquerón del Padre Abad; 16: collecting trip to Cuevas de las Lechuzas; 17-18: trip to Pucallpa; 19: collected at Boquerón del Padre Abad; 20: collecting trip to region north of Tingo Maria; 21: short excursions near Tingo Maria.

March 23: Tingo Maria-Lima

March 24-April 6: Lima

II. ECUADOR (April 6-22, 1975)

April 6-10: Quito

April 11-16: excursions in environs of Quito

11: trip to region of Tanadayapa; 12: trip to Nanegal and environs; 13: to region of Tandapi (road to Santo Domingo); 14: excursion to region east of Quito; 15: Quito; 16: excursion to Mitad del Mundo and Calacali.

April 17: excursion to north Ecuador (Chota valley and El Angel)

April 18-22: Quito

III. COLOMBIA (April 22 - May 11, 1975)

April 22-29: Bogotá

April 30-May 4: trip to northern Colombia

30: Bogotá-San Gil; 1: San Gil-Pamplona; 2: excursion to region of Cúcuta; 3: Pamplona-Sogamoso; Sogamoso-Bogotá.

May 5-11: Bogotá

IV. VENEZUELA (May 11 - June 3, 1975)

May 11-13: Caracas

May 13-22: at biological station "Rancho Grande"

May 22-24: Caracas

24: collecting trip to region of Colonia Tovar

May 25-June 2: trip to western Venezuela

25: Caracas-Baranitas; 26: Baranitas-Mérida; 27: excursion to region of Lagunillas; 28: Mérida-Barquisimeto; 29: Barquisimeto-Coro; 30: Coro-"Rancho Grande" (there until June 2).

June 2-3: Caracas

V. BRAZIL (June 4-11, 1975)

June 4-11: Rio de Janeiro and at Campus Universidade Federal Rural

11 63A - Dept. Lima, Río Chillón valley, 11.5 km SW Canta; in mosses and leaf litter; 2270 m; 2.II.1975,

Localities.

A capital-letter after the station-number indicates a different habitat at the same locality; an ordinary-letter indicates that the locality was visited before. Localities 1-62 are described in Breure, 1974. Distances usually measured by road, unless otherwise stated.

VELDNR.

PERU.

10 63 - Dept. Lima, Río Chillón valley, 10 km SW Canta; sparse vegetation near rocks and stony slope; estivating on plants and rocks; 2300 m; 2.II.1975.

9 64 - Dept. Lima, Río Chillón valley, 25.5 km SW Canta; grassy vegetation with rock-outcrops; in vegetation and on rocks; 1660 m; 2.II.1975.

12 65 - Dept. Lima, Río Chillón valley, 30 km NE Yangas; hillslope with agaves, small cacti and shrubs; at basis of rocks estivating on plants; 1950 m; 2.II.1975.

8 66 - Dept. Lima, Río Santa Eulalia valley, 3 km above hydro-electric plant "Carampoma"; steppe with puya's and small cacti; among mosses and small vegetation; 3370 m; 1.II.1975.,

7 67 - Dept. Lima, Río Santa Eulalia valley, 3 km above Autisha; sec. vegetation; in leaf litter among shrubs etc.; 2500 m; 1.II.1975.

6 68 - Dept. Lima, Río Santa Eulalia valley, 5 km above Huinco, small ravine immediately left after tunnel; rock-outcrops with grasses, shrubs and a few trees; estivating on vegetation and rocks; 2150-2170 m; 1.II.1975.

s.n. - Dept. Lima, Río Santa Eulalia valley, 2 km above Huinco; estivating on rock; 1940 m; 1.II.1975.

5 69 - Dept. Lima, Río Santa Eulalia valley, 14 km above Sta Eulalia; stony hillslope with small shrubs and a few cacti; on shrubs and stones; 1685-1700 m; 1.II.1975.

4 70 - Dept. Lima, Río Santa Eulalia valley, 9 km above Sta Eulalia; stony hillslope with small plants and cacti; estivating

on plants and under stones; 1480 m; 25.I.1975.

- 3 71 - Dept. Lima, Río Rimac valley, El Infiernillo, abt. 105 km ENE Lima; slope with sparse vegetation of small shrubs and cacti; among small stones; 3340 m; 25.I.1975.
- 2 72 - Dept. Lima, Río Rimac valley, a few km E Surco (= aprox. 75 km ENE Lima), where railroad passes by viaduct; secondary vegetation; in debris under small trees and shrubs and on rocks; 2100 m; 25.I.1975.
- 1 73 - Dept. Lima, Río Rimac valley, 43 km ENE Lima; hillslope with large stones and sparse vegetation of cacti and low shrubs; among stones; 1100 m; 25.I.1975.
- s.n. - Dept. Lima, Lima, Miraflores; garden; 180 m; 24.I.1975.
- 13 74 - Dept. Lima, near José Galvez, SSE Lima; lomas-vegetation; among vegetation; 100-200 m; 4.II.1975.
- 16 75 - Dept. Lima, Río Cañete valley, Quichao, 5 km of Laraos on footpath to Yauyos; slope with rock-outcrops and shrubvegetation; estivating on shrubs and rocks; 3430 m; 6.II.1975.
- 15 76 - Dept. Lima, Río Cañete valley, 4.5 km of Laraos on footpath to Yauyos; slope with puya's and shrubvegetation; on shrubs; 3460 m; 6.II.1975.
- 17 77 - Dept. Lima, Río Cañete valley, 0.5-1.0 km of Laraos on footpath to Tintín; between stones of walls of Inca-terraces; 3420 m; 6.II.1975.
- 18 78 - Dept. Lima, Río Cañete valley, 12.3 km E Magdalena on road to Alis; sec. vegetation; in earth of chasms; 2800 m; 6.II.1975.
- 14 79 - Dept. Lima, Río Cañete valley, 1 km above Puente Auco on road to Yauyos; stony slope at basis of rock-face, with xerophytic shrubs, cacti etc.; in leaf litter and under rocks and in small chasms; 2070 m; 5.II.1975.
- 19 80 - Dept. Arequipa, near Atiquipa, abt. 590 km SE Lima; lomas-vegetation (parklomas); among vegetation; 300-600 m; 8.II.1975.

- 20 81 - Dept. Arequipa, ca. 21 km S Atico, near km 722 Panamericana;
Neoraimondi-lomas; among and under rocks; 20-30 m; 8.II.1975.
- 21 82 - Dept. Puno, hills E of Huanta, 40 km N Puno; rock-outcrop with
small shrubs; estivating on plants and rocks; 3825 m; 13.II.
1975.
- 22 83 - Dept. Puno, hills near Caracoto, 37 km NNW Puno; rocks with
small shrubs; estivating on plants and in chasms; 3825 m;
13.II.1975.
- 23 84 - Dept. Puno, 8 km S Taruco on road to Pusi, 34 km NE Juliaca;
hills with rock-outcrop and shrubvegetation; under rocks,
in chasms and in shrubs; 3840 m; 13.II.1975.
- 25 85 - Dept. Puno, 12.0 km S Pusi, road to Capachica, 55 km E Juliaca;
rocky hillslope with cacti and shrubs; among vegetation;
3930 m; 13.II.1975.
- 24 86 - Dept. Puno, 14.5 km S Pusi, road to Capachica, 57.5 km E Juliaca;
hillslope with puna-vegetation; under and between stones;
3900 m; 13.II.1975.
- 26 87 - Dept. Cuzco, hill 13.7 km S Sicuaⁿsi; grasses and xerophytic
shrubs; among plants and stones; 3730 m; 14.II.1975.
- 27 88 - Dept. Cuzco, 8.1 km of Combapata on road to Yanaoca (121 km SE
Cuzco); rock-face with grasses, shrubs and mosses; among
stones, mosses and in earth; 3760 m; 14.II.1975.
- 32 89 - Dept. Cuzco, abt. 2 km of Huarcapay, road to Pisac (32 km E
Cuzco); hillslope with partly xerophytic vegetation;
among mosses and in leaf litter; 3000 m; 16.II.1975.
- 40 90 - Dept. Cuzco, hill 10.1 km E Cuzco; secondary vegetation of
xerophytic shrubs, grasses and a few trees; estivating
on grasses and Puya or under stones; 3215 m; 19.II.1975.
- 44 91 - Dept. Cuzco, 5.7 km S Cuzco, road to Paruro; hillslope with
stones and mostly xerophytic shrubs; under stones;
3550 m; 20.II.1975.

- 46 92 - Dept. Cuzco, hills near Yaurisque, 43.8 km S Cuzco; grassy hillslope with scattered, partly xerophytic shrubs; estivating on grasses and shrubs; 3390-3410 m; 20.II.1975.
- 92A - Idem; among mosses and in earth, also in chasms.
- 45 93 - Dept. Cuzco, Yaurisque; garden; 3380 m; 20.II.1975.
- 49 94 - Dept. Cuzco, 5.7 km S Yaurisque (= 50.2 km S Cuzco); hillslope with stones and mostly xerophytic vegetation; among and under stones; 3630 m; 23.II.1975.
- 50 95 - Dept. Cuzco, 11.4 km S Yaurisque; hillslope with open, secondary vegetation; in Puya; 3710-3740 m; 23.II.1975.
- 51 96 - Dept. Cuzco, 13.4 km N Paruro; grassy hillslope with scattered shrubs and small trees; in shrubs; 3600-3630 m; 23.II.1975.
- s.n. - Dept. Cuzco, Cuzco; garden; 3400 m; 17.II.1975.
- 42 97 - Dept. Cuzco, Tambomachay, few km's N Cuzco; grassy hillslope with rock-outcrop and scattered, low shrubs; among rocks; 3840 m; 19.II.1975.
- 43 98 - Dept. Cuzco, calcareous rocks near entrance to Tambomachay; xerophytic shrubs at basis of rock-face; at basis of stones; 3800 m; 19.II.1975.
- 47 99 - Dept. Cuzco, 5.4 km of Paucartambo, road to Cuzco; grassy slope with scattered, low and partly xerophytic shrubs; in earth among grasses and mosses; 3180 m; 22.II.1975.
- 48 100 - Dept. Cuzco, 64.0 km SW Paucartambo, road to Cuzco; rocky slope with shrubs; under and among stones, also estivating on grasses; 3520-3540 m; 22.II.1975.
- 41 101 - Dept. Cuzco, Río Vilcanota valley, 25.8 km SE Pisac; steep slope with rock-outcrop and stones, grassy vegetation with shrubs, Tillandsia on rock-face; in earth and chasms, also under stones; 3090-3120 m; 19.II.1975.
- 33 102 - Dept. Cuzco, Río Vilcanota valley, 2.8 km SE Pisac; hillslope with rock-outcrop, grassy vegetation with some shrubs; under stones; 2980 m; 15.II.1975.

- 34 103 - Dept. Cuzco, Río Vilcanota valley , 13.3 km NW Pisac; rock-faces with Tillandsia sp.; in earth and among roots of Tillandsia; 2930 m; 15.II.1975.
- 103a - Idem; 16.II.1975.
- 35 104 - Dept. Cuzco, Río Cochas valley, 10.0 km N Calca; grassy hill-slope with a few shrubs; on rocks and at basis of rocks in roots of vegetation; 3450-3490 m; 16.II.1975.
- 31 105 - Dept. Cuzco, Río Urubamba valley, 2.6 km ESE Ollantaytambo; hillslope with xerophytic shrubs; among leaf litter and on shrubs; 2860 m; 15.II.1975.
- 36 106 - Dept. Cuzco, Río Urubamba valley, 2.1 km ESE Ollantaytambo; rock-face with Tillandsia and xerophytic shrubs at basis; among shrubs; 2880 m; 17.II.1975.
- 30 107 - Dept. Cuzco, Río Urubamba valley, Ollantaytambo; steep slope with xerophytic vegetation, (Tillandsia and other bromeliads on rock-faces); in roots of Tillandsia and under bromeliads; 2920-2940 m; 15.II.1975.
- 37 108 - Dept. Cuzco, Río Urubamba valley, 4.0 km WNW Ollantaytambo; rock-face with Tillandsia and xerophytic vegetation; in roots of Tillandsia; 2835 m; 17.II.1975.
- 39 109 - Dept. Cuzco, 21.8 km of Quillabamba (near Chaulay), road to Ollantaytambo; stony slope with sec., low evergreen selva mixed with pillar-cacti; among stones and on treestem; 1280 m; 18.II.1975.
- 109A - Idem; at basis of steep slope with xerophytic vegetation; in leaf litter.
- 109B - Idem; among boulders at riverside.
- 38 110 - Dept. Cuzco, Río Urubamba valley, 3.4 km NE Quillabamba, road to Ollantaytambo; grass verge and border of forest; among plants and in leaf litter; 1200 m; 18.II.1975.

- 29 111 - Dept. Cuzco, Río Urubamba valley, 4.8 km S Urubamba, road to Anta; grassy hillslope with xerophytic vegetation of mimosa-trees and low shrubs; on shrubs and among litter and mosses; 3120 m; 15.II.1975.
- 28 112 - Dept. Cuzco, 2.3 km N Anta, road to Urubamba; rock-outcrop with grasses and xerophytic shrubs; in leaf litter, earth and estivating on grasses; 3380 m; 15.II.1975.
- s.n. - Dept. Cuzco, a few km W Limatambo, abt. 80 km W Cuzco; rocky hillslope with xerophytic shrubs and mimosa-trees; among vegetation, under stones and in chasms; 2600 m; 25.II.1975.
- 52 113 - Dept. Cuzco, 5 km E Puente Cunyac, 95.5 km W Cuzco; river-bank with xerophytic vegetation; in shrubs and under stones; 2075 m; 25.II.1975.
- 53 114 - Dept. Apurimac, Río Apurimac valley, Puente Cunyac, 96.5 km ENE Abancay; river-bank with xerophytic vegetation; under stones and on shrubs; 2000 m; 25.II.1975.
- 54 115 - Dept. Apurimac, Río Pachachaca valley, abt. 12 km W Abancay; river-bank with xerophytic vegetation; on shrubs and under stones; 1750 m; 26.II.1975.
- 55 116 - Dept. Apurimac, Río Pachachaca valley, 19.5 km SW Abancay; hillslope with xerophytic vegetation; among and under stones; 1960 m; 26.II.1975.
- 56 117 - Dept. Apurimac, 32 km SW Abancay; grassy slope with low shrubs; estivating on shrubs; 2650 m; 26.II.1975.
- 59 118 - Dept. Apurimac, Río Pincos valley, near Pincos; grassy slope with low shrubs; estivating on shrubs; 2650 m; 27.II.1975.
- 58 119 - Dept. Apurimac, Río Pincos valley, Hacienda San Carlos; shrub-vegetation near sugar-cane fields; among grasses and in leaf litter; 2225 m; 27.II.1975.
- 119A - Idem; rocky hillslope with xerophytic vegetation, agaves and puya's; on shrubs and agaves/puya's.

- 57 120 - Dept. Apurimac, 9 km E Andahuaylas; road-side with scattered low shrubs, partly xerophytic; estivating on non-xerophytic shrubs; 3250 m; 26.II.1975.
- 60 121 - Dept. Apurimac, hills near Chincheros, 88 km WNW Andahuaylas; hillslope with low shrubs and some agaves; under stones and mosses; 2810-2825 m; 28.II.1975.
- 61 122. - Dept. Apurimac, Río Pampas valley, 6 km S of bridge, 118 km WNW Andahuaylas; river-bank with mimosa-trees, Opuntia and Cereus; in trees, cacti and shrubs; 2100 m; 28.II.1975.
- 122A - Idem; stony slope at basis of rock-face; vegetation as sta. 122 but also trees and non-xerophytic shrubs; on rocks and boulders, on shrubs and cacti; 2110-2150 m; 28.II.1975.
- 62 123 - Dept. Ayacucho, Río Pampas valley, 0.9 km W bridge, 141 km SE Ayacucho; slope with scarce vegetation of low shrubs, Opuntia and a few trees; on plants; 2000 m; 1.III.1975.
- 63 124 - Dept. Ayacucho, 3.8 km W bridge Río Pampas, between Ninabamba and Pajonal; stony slope at basis of rock-face with sec. vegetation of trees and shrubs; under boulders, on plants and stones; 2080 m; 1.III.1975.
- 64 125 - Dept. Ayacucho, ravine near Pajonal, 137 km SE Ayacucho; xerophytic vegetation of shrubs, mimosa-trees and cacti; on stones in loamy wall, on vegetation; 2040-2070 m; 1.III.1975.
- s.n. - Dept. Ayacucho, Chumbes, 122 km SE Ayacucho; under shrubs; 2850 m; 1.III.1975.
- 65 126 - Dept. Huancavelica, 2.3 km E Huancavelica; hillslope at basis of rock-face with low scattered shrubs and a few cacti; on shrubs, in earth and under mosses; 3650 m; 3.III.1975.
- 66 127 - Dept. Huancavelica, 41.9 km N Huancavelica; rock-outcrop in steppe with xerophytic vegetation; under stones, in earth and mosses; 3710 m; 3.III.1975.

- 67 128 - Dept. Huancavelica, Río Mantaro valley, 6.5 km S Izcuchaca,
70 km N Huancavelica; shrub-steppe with partly xerophytic
vegetation; under shrubs and stones; 3170 m; 3.III.1975.
- 68 129 - Dept. Huancavelica, Río Mantaro valley, 7.2 km SE Izcuchaca,
79.2 km SSE Huancayo; shrub-steppe with mostly xerophytic
vegetation; under stones and in (non-xerophytic) shrubs;
2850-2860 m; 3.III.1975.
- 69 130 - Dept. Junín, hills near Ataura, 83.5 km SE La Oroya; sec.
vegetation near maize-fields and in rain gullies; under and
in low shrubs, in leaf litter; 3350-3380 m; 6.III.1975.
- 70 131 - Dept. Junín, hillslope near Parco, 66 km SE La Oroya; semi-arid
grass-steppe with ver low shrubs and ferns; estivating in
shrubs; 3410-3440 m; 6.III.1975.
- 71 132 - Dept. Junín, Llocllapampa, 57 km SE La Oroya; ravine with shrub-
vegetation; in vegetation, on stones and rocks; 3450 m;
6.III.1975.
- 72 133 - Dept. Junín, 36 km SE La Oroya; grassy slope with scattered,
low shrubs; in grasses and shrubs; 3600 m; 6.III.1975.
- 85 134 - Dept. Junín, Abra Cochac, 28.2 km W Tarma; puna; in roots of
grasses near stones; 4180 m; 11.III.1975.
- 73 135 - Dept. Junín, 13.1 km W Tarma; shrub-steppe with cacti; under
shrubs and on vegetation; 3600 m; 6.III.1975.
- 84 136 - Dept. Junín, 8.1 km W Tarma; shrub-steppe with cacti and on
rock-face Tillandsia; in leaf litter under shrubs;
3350 m; 11.III.1975.
- 74 137 - Dept. Junín, Cerro Huayuncayo near La Florida, 7.2 km NE Tarma;
slope with shrub-steppe and agaves at basis; on vegetation,
on and under stones, in earth, chasms and on rock-faces;
2950-3150 m; 7.III.1975.
- 75 138 - Dept. Junín, Río Tarma valley, Cerro Huailahuichán, 13.7 km NE
Tarma; hillslope with agaves, Tillandsia sp. and low shrubs;
under Tillandsia; 2825-2850 m; 7.III.1975.

- 76 139 - Dept. Junín, near Carpapata, 33.2 km NE Tarma; cloud forest; in leaf litter near stones, under mosses; 2200-2220 m; 7.III.1975.
- 83 140 - Dept. Junín, near Mal Alma, 40 km NE Tarma; cloud forest; in leaf litter and on tree trunks; 1860-1950 m; 11.III.1975.
- 77 141 - Dept. Junín, Río Tarma valley, Huacapistana, abt. 42 km NE Tarma; in grassy verge of road; 1810 m; 7.III.1975.
- 78 142 - Dept. Junín, Río Tarma valley, Pan de Azúcar, 12.6 km SW San Ramón; rain forest; in leaf litter near rock-face and in converted forest; 1300-1350 m; 7.III.1975.
- 80 143 - Dept. Junín, 16.8 km WNW San Ramón, road to Mina Pichita Caluga; cloud forest; in leaf litter and on mossy tree trunks; 1700m; 8.III.1975.
- 79 144 - Dept. Junín, 2.3 km below Mina Pichita Caluga, 19.5 km WNW San Ramón; cloud forest; among vegetation and on mossy rock-face and stones; 1850 m; 8.III.1975.
- s.n. - Dept. Junín, Mina Pichita Caluga, 21.8 km WNW San Ramón; among grasses; 2000 m; 8.III.1975.
- 81 145 - Dept. Junín, Río Chanchamayo valley, hills near Puente Herrería, 5.7 km N San Ramón; low rain forest with well-developed shrub-layer; in leaf litter; 800-850 m; 9.III.1975.
- 82 146 - Dept. Junín, Río Chanchamayo valley, hill near Puente Quimiri, 14.3 km N San Ramón; rain forest; in leaf litter; 790-830 m; 9.III.1975.
- 86 147 - Dept. Junín, hill near Huarmipuquio, 5.5 km W Junín; puna with rock-outcrop; in grasses near stones; 4170-4225 m; 12.III.1975.
- 87 148 - Dept. Junín, 17 km NW Junin, western side of Lago Junín; puna mixed with xerophytic vegetation; among plants and shrubs, mostly nearby stones and rock-outcrop; 4080 m; 12.III.1975.
- 88 149 - Dept. Junín, hill near Inca Pirca, 34 km N Junín, western side Lago Junin; puna with low, spiny shrubs; among plants,

under stones and in chasms; 4200-4260 m; 12.III.1975.

- 89 150 - Dept. Pasco, 3.9 km S Cerro de Pasco; puna; among vegetation;
4340 m; 12.III.1975.
- 90 151 - Dept. Pasco, 26.7 km NNE Cerro de Pasco, some km S Huariaca;
shrub-steppe; under stones and among agaves; 3250 m;
13.III.1975.
- 91 152 - Dept. Pasco, 42.5 km NNE Cerro de Pasco, abt. 10 km N Huariaca;
river-bank with grasses and scattered, low shrubs; under
stones; 2800 m; 13.III.1975.
- 92 153 - Dept. Huánuco, 7.6 km S Ambo; semi-arid shrub-steppe; in vegetation,
under stones and on mossy boulders; 2360-2380 m; 13.III.1975.
- 93 154 - Dept. Huánuco, Cerro Arcupumco near Ambo; semi-arid shrub-steppe;
in shrubs, grasses and agaves, under stones; 2100-2225 m;
13.III.1975.
- 94 155 - Dept. Huánuco, 12 km S Huánuco; semi-arid shrub-steppe; on plants
and under stones; 2020-2060 m; 13.III.1975.
- 95 156 - Dept. Huánuco, 8.0 km NE Huánuco; semi-arid shrub-steppe; under
stones and estivating in plants; 1890 m; 14.III.1975.
- 105 157 - Dept. Huánuco, Cueva de las Pavas, 9.0 km S Tingo Maria; rain
forest; near creek on stones, boulders and rock-faces,
also in leaf litter; 660 m; 21.III.1975.
- 100 158 - Dept. Huánuco, near Tingo Maria, Rio Mozañ valley, Cuevas de las
Lechuzas; rain forest; on mossy boulders and in leaf litter;
670 m; 16.III.1975.
- 99 159 - Dept. Huánuco, Tingo Maria, hill near bridge in road to airport;
rain forest; in leaf litter; 670-710 m; 16.III.1975.
- 98 160 - Dept. Huánuco, Tingo Maria; under stones in garden; 670 m;
15/16.III.1975.
- 104 161 - Dept. San Martín, Ramal de Aspozana, 86.2 km NNE Tingo Maria;
rain forest; on rock-face, on leaves and in leaf litter;
590 m; 20.III.1975.

- 103 162 - Dept., San Martin, 148.5 km NNE Tingo Maria, right margin Rio Cachiyacu; low rain forest; on leaves and in leaf litter; 525 m; 20.III.1975.
- 97 163 - Dept. Huánuco, 73-74 km ENE Tingo Maria; rain forest; on stones and in leaf litter; 520-550 m; 15.III.1975.
- 96 164 - Dept. Huánuco, Boquerón del Padre Abad, 78-80 km ENE Tingo Maria; rain forest; in leaf litter and on leaves; 470-520 m; 15.III.1975.
- 164a - Idem; on leaves, tree trunks and on boulders near riverside; 19.III.1975.
- 101 165 - Dept. Loreto, left margin Rio Chio, abt. 120 km E Tingo Maria; verge of road; in leaf litter; 270 m; 17.III.1975.
- 102 166 - Dept. Loreto, Yarinacocha, abt. 6 km W Pucallpa; among grasses; 200 m; 18.III.1975.

ECUADOR.

- 113 167 - Prov. Pichincha, 59 km W Macachi, road to Santo Domingo; cloud forest; in leaf litter and on leaves; 1250 m; 13.IV.1975.
- 112 168 - Prov. Pichincha, hill N Tandapi, 71.7 km SW Quito on road to Santo Domingo; sec. forest; in leaf litter; 1600 m; 13.IV.1975.
- 111 169 - Prov. Pichincha, 66.2 km SW Quito, road to Santo Domingo; cloud forest; in leaf litter; 1750 m; 13.IV.1975.
- 110 170 - Prov. Pichincha, 30 km NW Quito, road to Tandayapa; roadside with rock-outcrop; among vegetation; 2200 m; 11.IV.1975.
- 114 171 - Prov. Pichincha, near Nanegal, abt. 75 km NW Quito; rain(?) forest; in leaf litter; 1500 m; 12.IV.1975.
- 117 172 - Prov. Pichincha, road to crater Palalugua, 9.5 km off main road to Calacalf, abt. 19 km N Quito; low cloud forest; on rock-face and in leaf litter; 2610 m; 16.IV.1975.

- 116 173 - Prov. Pichincha, 1.0 km W Mitad del Mundo, abt. 13 km N Quito; shrub-steppe with scattered, very low shrubs; in shrubs; 2400 m; 16.IV.1975.
- 115 174 - Prov. Pichincha, 22.6 km NNE Quito, road to Cayambe; shrub-steppe; in mulch and grasses; 2200 m; 14.IV.1975.
- 118 175 - Prov. Carchi, 35 km N Ibarra, road to El Angel (148 km NE Quito); shrub-steppe with low mimosa-trees; among vegetation; 1700 m; 17.IV.1975.

COLOMBIA.

- 119 176 - Dept. Cundinamarca, La Merced, abt. 35 km W Bogotá on road Mosquera-La Mesa; cloud forest; in leaf litter; 2700-2750 m; 25.IV.1975.
- 120 177 - Dept. Cundinamarca, ca. 29 km W Bogotá on road Mosquera-La Mesa; shrub-steppe with Opuntia; in Opuntia; 2675 m; 25.IV.1975.
- 178 - Dept. Cundinamarca, Mesitas del Colegio, 24 km SW Bogotá on road to Ibagué; in banana-trees; 28.IX.1974 (Emilia Soler de Neiva leg.).
- s.p. - Dept. Cundinamarca, Guayabetal, ca. 100 km SE Bogotá on road to Villavicencio; 1140 m; 2.V.1975 (P. Ruiz et al. leg.).
- 121 179 - Dept. Boyacá, 10 km NE Villa de Leiva (ca. 20 km as the crow flies NW Tunja); sec. vegetation of trees, shrubs and ferns; in leaf litter; 2350 m; 30.IV.1975.
- 122 180 - Dept. Santander, 4 km NE San Gil; semi-arid vegetation of trees, mimosas and shrubs; in leaf litter; 1325 m; 1.V.1975.
- 123 181 - Dept. Santander, Río Chicamocha valley, ca. 57 km NE San Gil; arid shrub-steppe; among vegetation; 1700 m; 1.V.1975.
- 124 182 - Dept. Norte de Santander, 10 km S Cúcuta; arid shrub-steppe; in leaf litter; 375 m; 2.V.1975.
- 125 183 - Dept. Norte de Santander, 33 km S Cúcuta; low deciduous forest; in leaf litter and earth on ledges; 750 m; 2.V.1975.

- 126 184 - Dept. Santander, 158 km S Pamplona (abt. 15 km S Málaga), Río Servitá valley; semi-arid vegetation of low trees and shrubs; in leaf litter and mulch and on tree trunks; 1300 m; 3.V.1975.
- 127 185 - Dept. Boyacá, 218 km S Pamplona (a few km S Soatá); arid shrub-steppe; in leaf litter and mulch; 2100 m; 3.V.1975.
- VENEZUELA.
- 135 186 - Edo. Mérida, 36 km W Mérida; arid shrub-steppe (espinar); among vegetation; 670 m; 27.V.1975.
- 134 187 - Edo. Mérida, 26.3 km W Mérida, near Lagunillas; arid shrub-steppe with cacti (cardonal); among vegetation; 820 m; 27.V.1975.
- 136 188 - Edo. Trujillo, 27 km N Valera, road to Agua Viva; cardonal; among vegetation; 400 m; 28.V.1975.
- 137 189 - Edo. Lara, 18.1 km W Barquisimeto; cardonal; among vegetation and in mimosa-trees and low, spiny shrubs; 700 m; 29.V.1975.
- 138 190 - Edo. Lara, 33.3 NE Barquisimeto, road to Coro; espinar; among vegetation; 700 m; 29.V.1975.
- 139 191 - Edo. Lara, 79.5 km NE Barquisimeto, road to Coro; forest; in leaf litter; 300 m; 29.V.1975.
- 140 192 - Edo. Falcón, few km W Churugua, 109 km S Coro; espinar with some cacti; among vegetation; 750 m; 29.V.1975.
- 141 193 - Edo. Falcón, 84.9 km S Coro; espinar; among vegetation; 400 m; 29.V.1975.
- 131 194 - Edo. Aragua, National Park "Henry Pittier", trail from Guamitas to Pico Guacamaya; selva veranera; in leaf litter; 750-1250 m; 18.V.1975.
- 130 195 - Edo. Aragua, National Park "Henry Pittier", trail from Biological Station "Rancho Grande" to Pico Guacamaya; high montane forest; in leaf litter; 1450-1800 m; 18.V.1975.

- 129 196 - Edo. Aragua, National Park "Henry Pittier", trail from Biological Station "Rancho Grande" to Pico Guacamaya; low tropical cloud forest; in leaf litter; 1100-1350 m; 18.V.1975.
- 196a - Idem; 20.V.1975.
- 196b - Idem; 28.V.1975 (O. Huber leg.).
- 143 197 - Edo. Aragua, National Park "Henry Pittier", 48.1 km NW Maracay, road to Turiamo; selva veranera; in leaf litter and on rock ledges; 160 m; 31.V.1975.
- 142 198 - Edo. Aragua, National Park "Henry Pittier", 56.9 km NW Maracay, road to Turiamo; selva veranera; in leaf litter; 65 m; 31.V.1975.
- 128 199 - Edo. Aragua, National Park "Henry Pittier", 60.7 km NNW Maracay, road Playa de Cata-Cuyugua; espinar; leaf litter; 30 m; 15.V.1975.
- 199a - Idem; 31.V.1975.
- 144 200 - Edo. Aragua, National Park "Henry Pittier", 69.8 km NNW Maracay, road Playa de Cata-Cuyugua; selva de transición; in leaf litter and on tree-trunks; 460 m; 31.V.1975.
- 132 201 - Edo. Aragua, National Park "Henry Pittier", 20 km N Maracay, Reversa del Diablo; selva veranera; in leaf litter; 1275 m; 20.V.1975.
- 133 202 - Distrito Federal, hills near Colonia Tovar, 55 km W Caracas; high tropical cloud forest; in leaf litter; 2100 m; 24.V.1975.
- s.n. - Distrito Federal, Caracas; garden; in shrubs; 950 m; 23.V.1975.
- s.n. - Idem; 2.VI.1975.

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Samenvatting.

Van een recente verzameltocht door Zuid Amerika worden de reisroute en de vindplaatsen beschreven. Voor nadere gegevens over vegetatie, bodemkunde, klimatologie en ecologie wordt verwezen naar een aantal geselecteerde publikaties. Verdere waarnemingen en andere wetenschappelijke gegevens zullen elders worden gepubliceerd.

Address of the author:

Dept. of Systematic and Evolutionary Biology,
State University of Leiden,
c/o Rijksmuseum van Natuurlijke Historie,
Raamsteeg 2, Leiden.

Explanation of figures.

Fig. 1 - Central and southern Peru.

Fig. 1a - Dept. Arequipa, coastal region near Chala.

Fig. 2a - Valleys of ríos Rimac, Santa Eulalia and Chillón.

- a - Río Rimac
- b - Río Santa Eulalia
- c - Río Chillón

Fig. 2b - Valley of Río Cañete (Dept. Lima).

- d - Río Cañete

Fig. 3 - Southern Peru, region of Lake Titicaca and southern Dept. Cuzco.

Fig. 4 - Region of Cuzco.

- a - Río Paucartambo
- b - Río Vilcanota
- c - Río Urubamba
- d - Río Apurimac

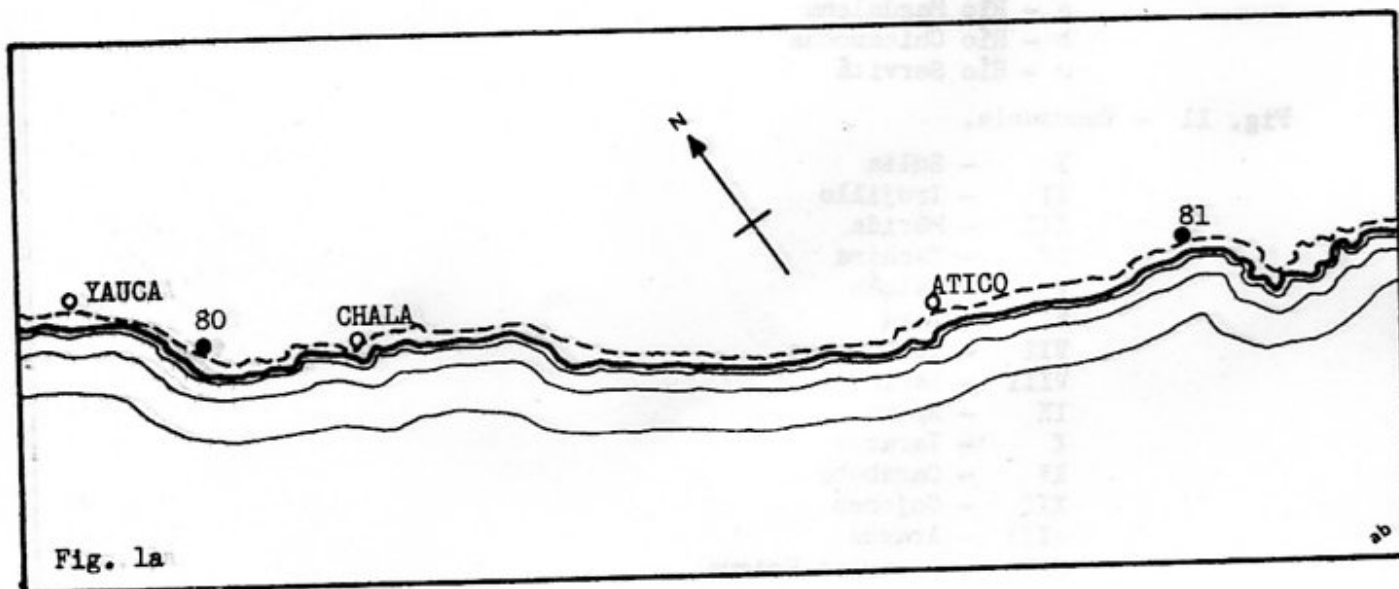
Fig. 5 - Dept. Apurimac

- a - Río Apurimac
- b - Río Pachachaca
- c - Río Pincos
- d - Río Pampas

Fig. 6 - Dept. Junín.

- a - Río Mantaro
- b - Lago Junín
- c - Río Paucartambo
- d - Río Perene
- e - Río Chanchamayo
- f - Río Tarma

Fig. 7 - Central Peru.



- a - Río Huallaga
- b - Río Ucayali
- c - Río Aguaytia

Fig. 8 - Ecuador.

- a - Río Chota

Fig. 9 - Colombia.

- I - Guajira
- II - Magdalena
- III - Atlantico
- IV - Bolivar
- V - Sucre
- VI - Cordoba
- VII - Antioquia
- VIII - Choco
- IX - Valle
- X - Cauca
- XI - Narno
- XII - Putumayo
- XIII - Amazonas
- XIV - Vaupes
- XV - Caqueta
- XVI - Huila
- XVII - Meta
- XVIII - Tolima
- XIX - Quindio
- XX - Risaralda
- XXI - Caldas
- XXII - Cundinamarca
- XXIII - Boyacá
- XXIV - Guainia
- XXV - Vichada
- XXVI - Arauca
- XXVII - Santander
- XXVIII - Norte de Santander
- XXIX - Cesar

Fig. 10 - Colombia..

- a - Río Magdalena
- b - Río Chicamocha
- c - Río Servitá

Fig. 11 - Venezuela.

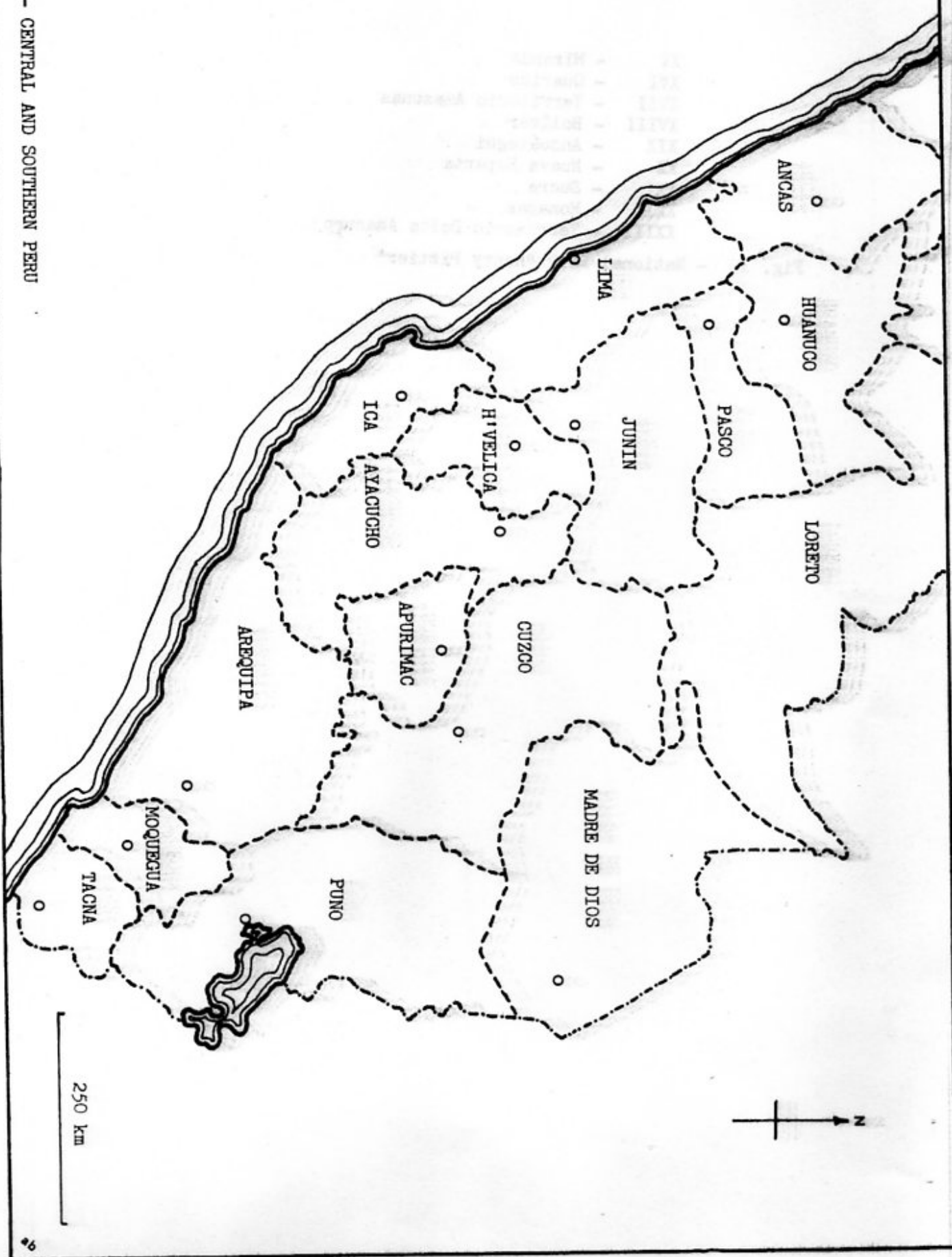
- I - Zulia
- II - Trujillo
- III - Mérida
- IV - Tachira
- V - Falcón
- VI - Lara
- VII - Portuguesa
- VIII - Barinas
- IX - Apure
- X - Yaracuy
- XI - Carabobo
- XII - Cojedes
- XIII - Aragua
- XIV - Distrito Federal

- XV - Miranda
- XVI - Guarico
- XVII - Territorio Amazonas
- XVIII - Bolívar
- XIX - Anzoátegui
- XX - Nueva Esparta
- XXI - Sucre
- XXII - Monagas
- XXIII - Territorio Delta Amacuro

Fig. 12 - National Park "Henry Pittier"



FIG. 1 - CENTRAL AND SOUTHERN PERU



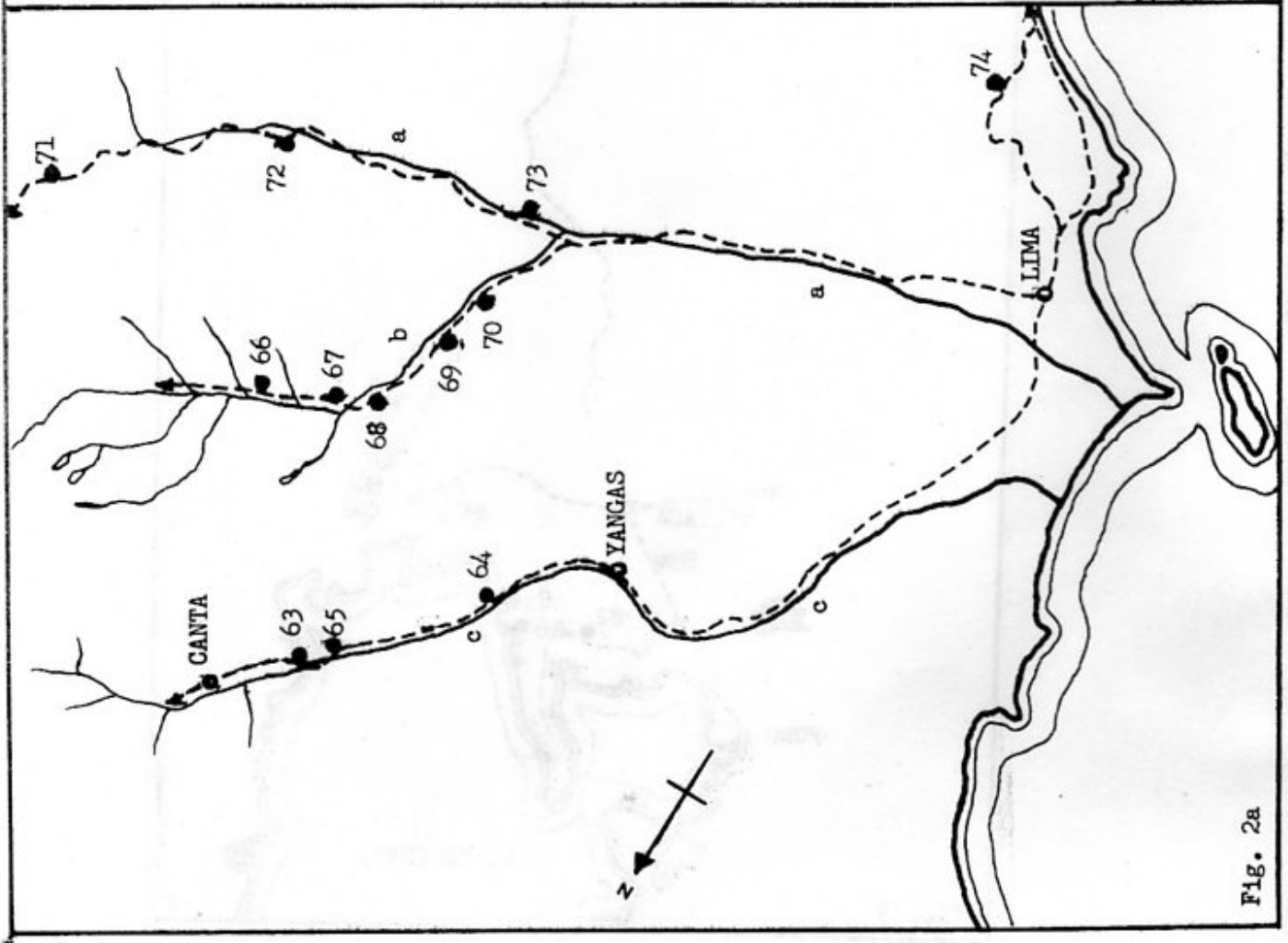
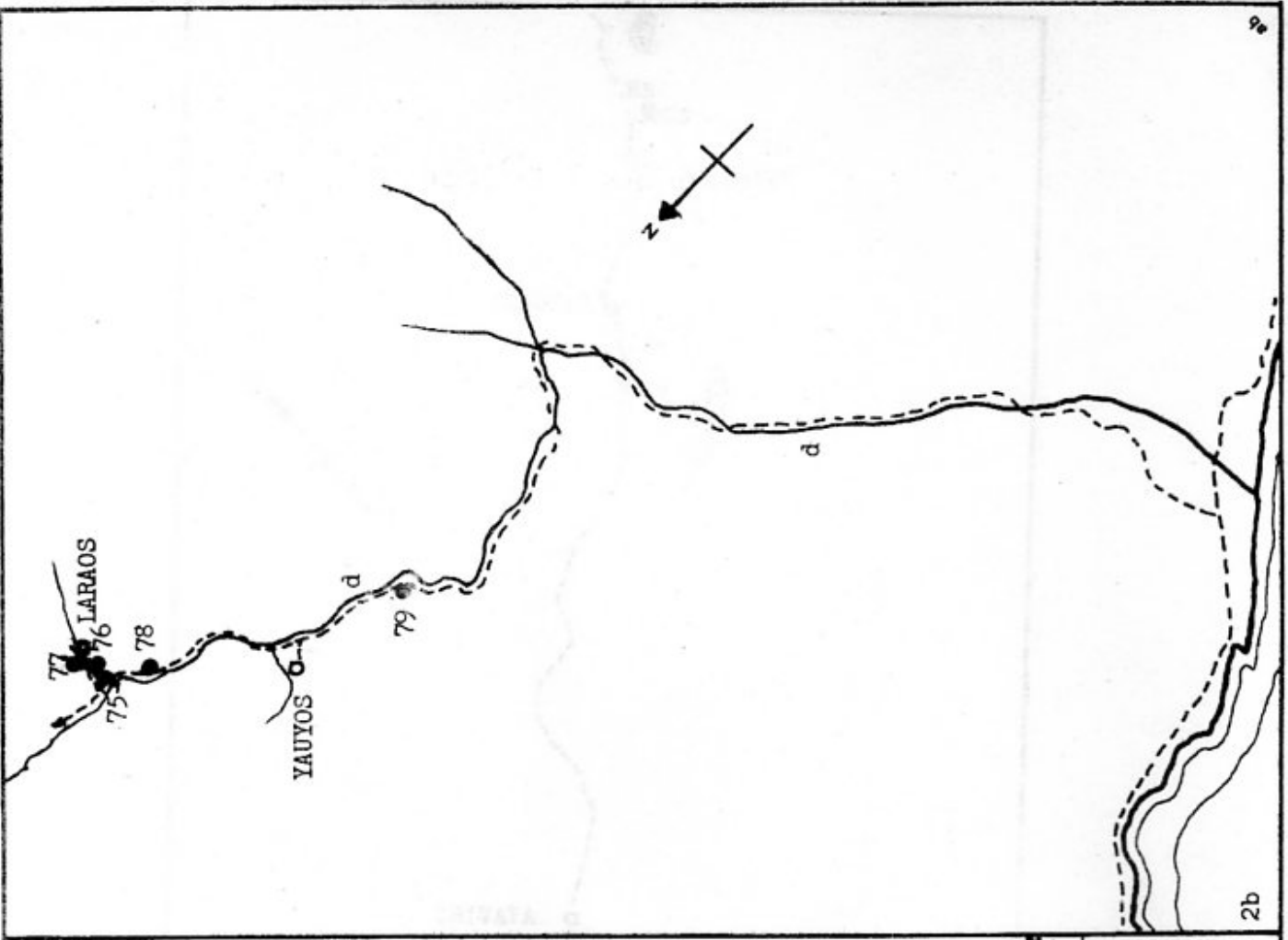


Fig. 2a



2b

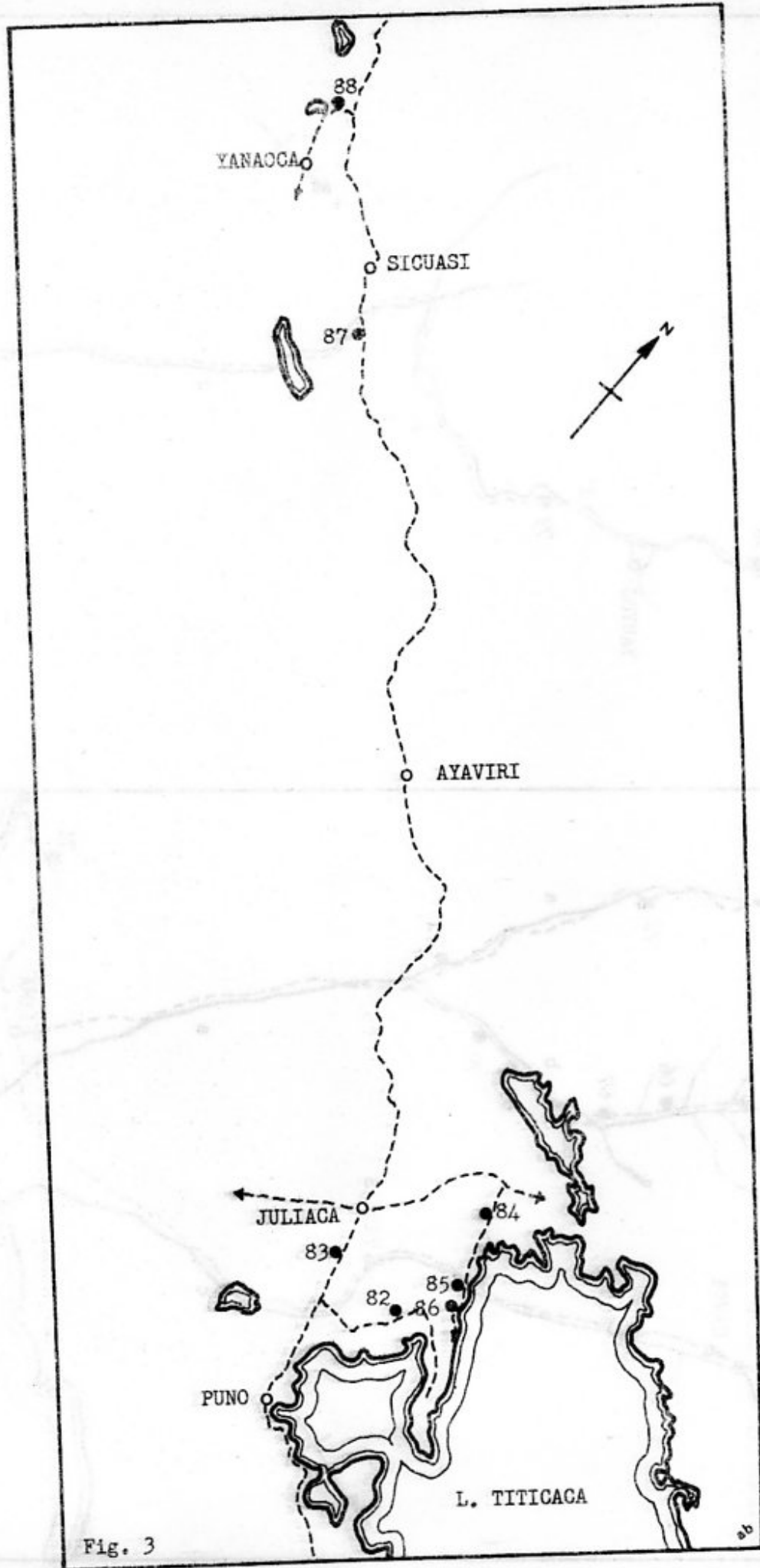


Fig. 3

ab

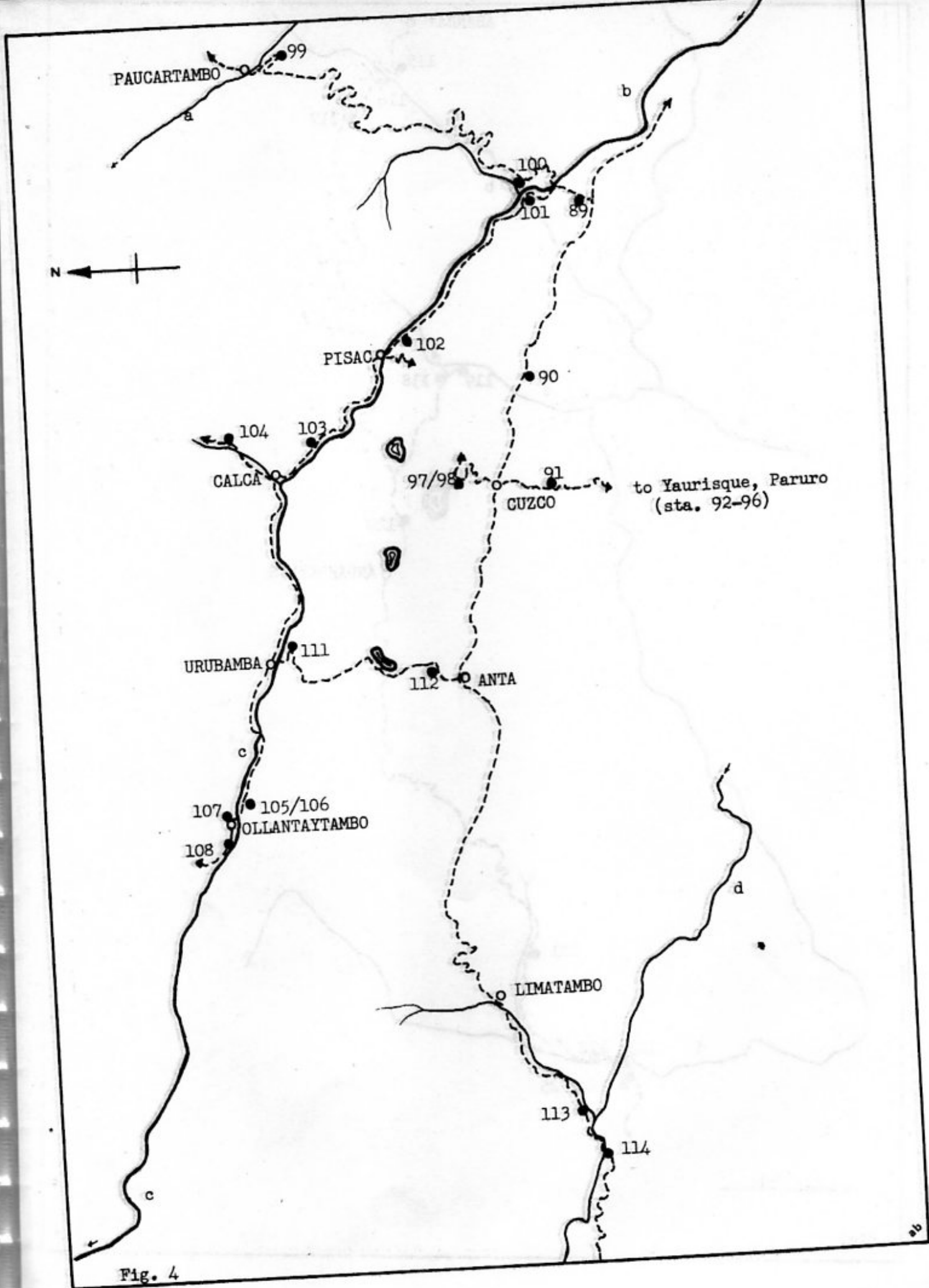


Fig. 4

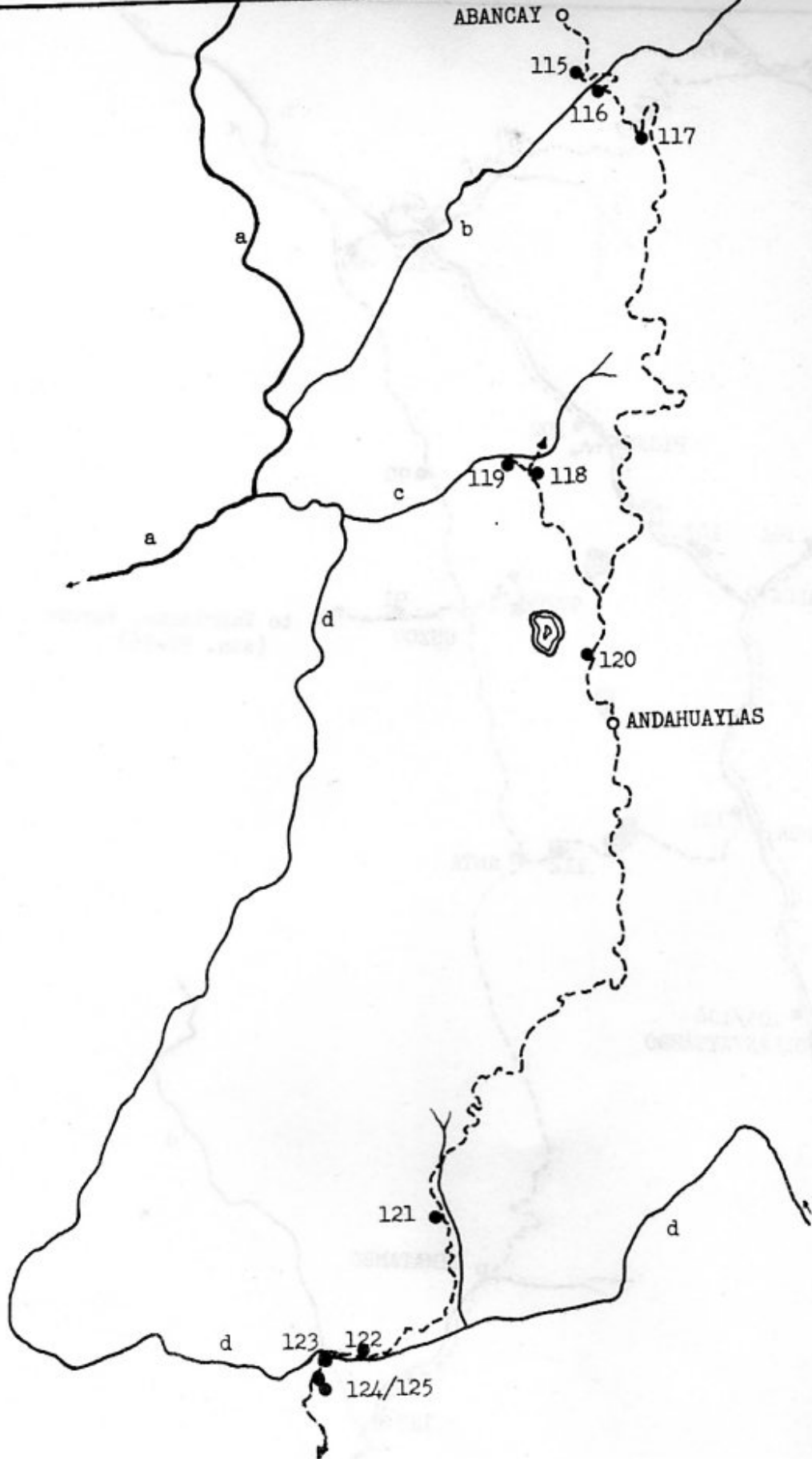


Fig. 5

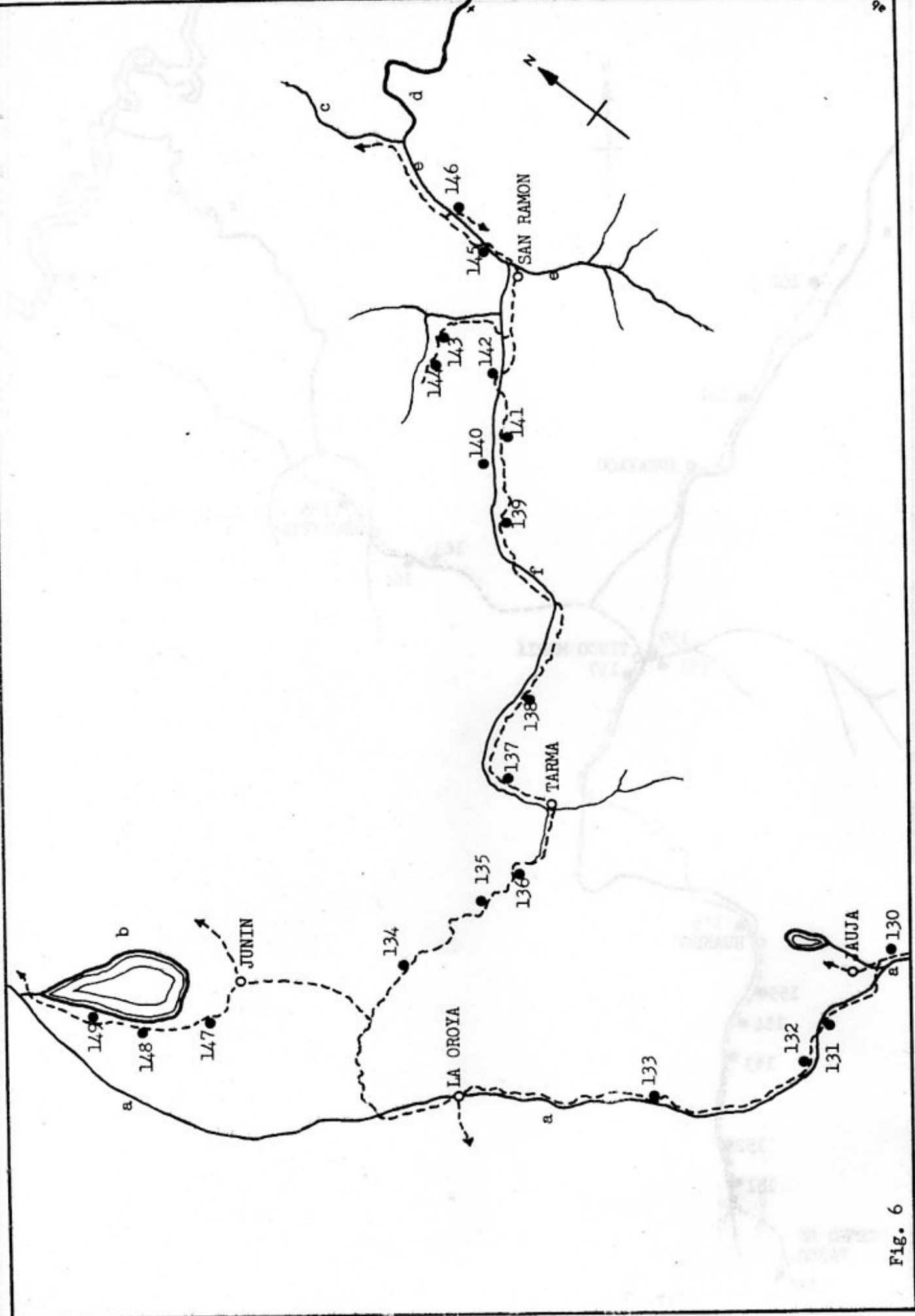


Fig. 6

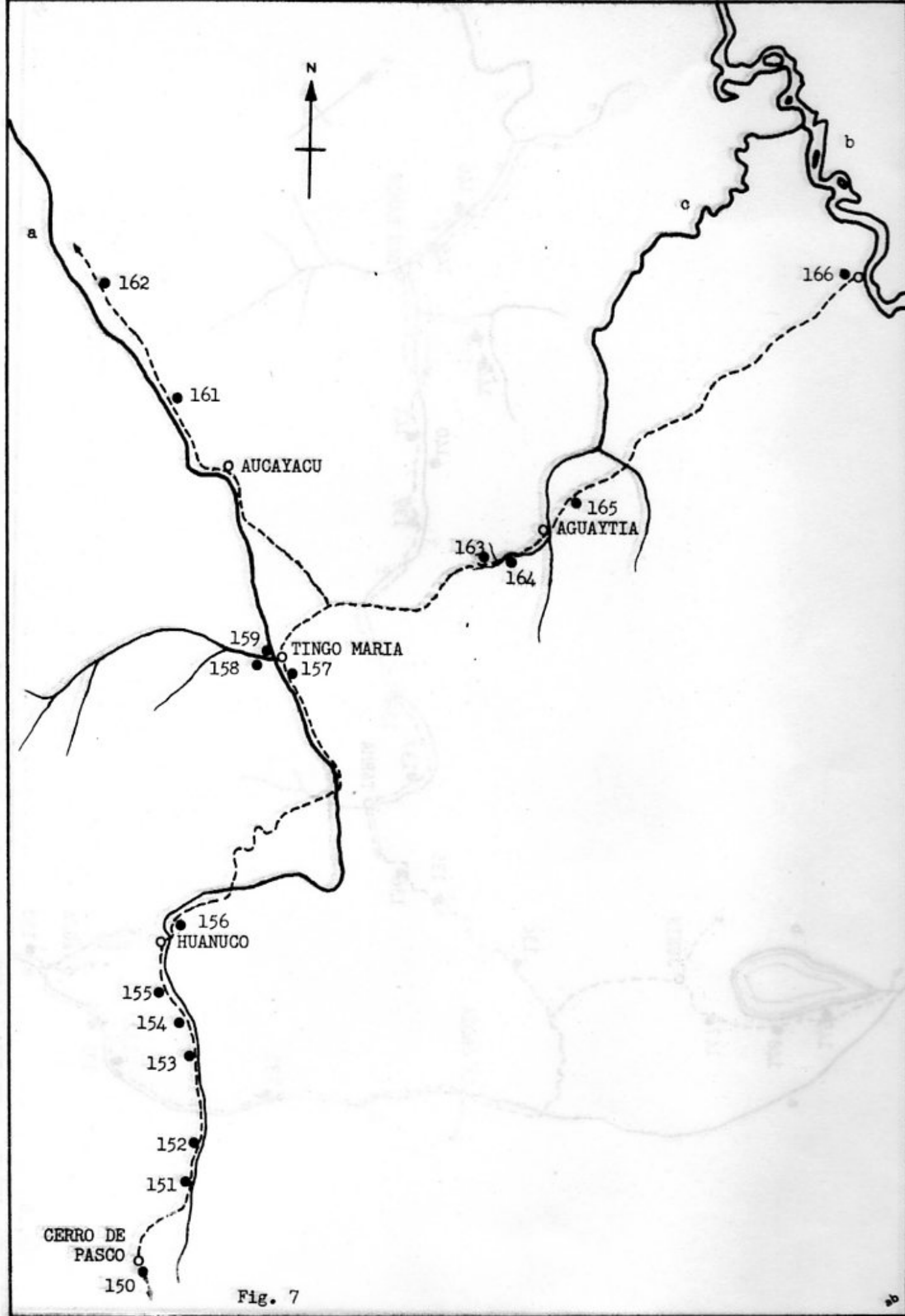


Fig. 7

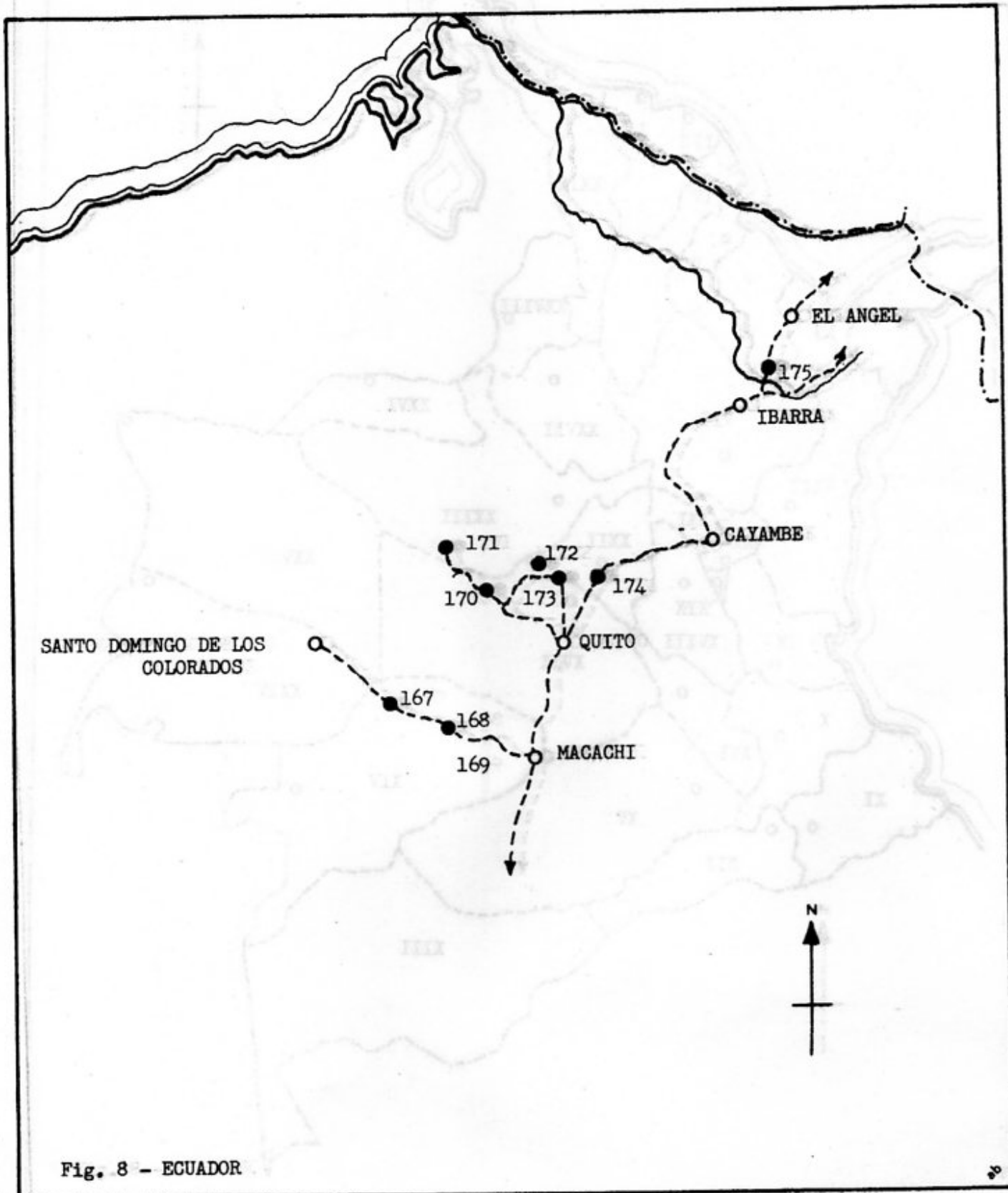


Fig. 8 - ECUADOR

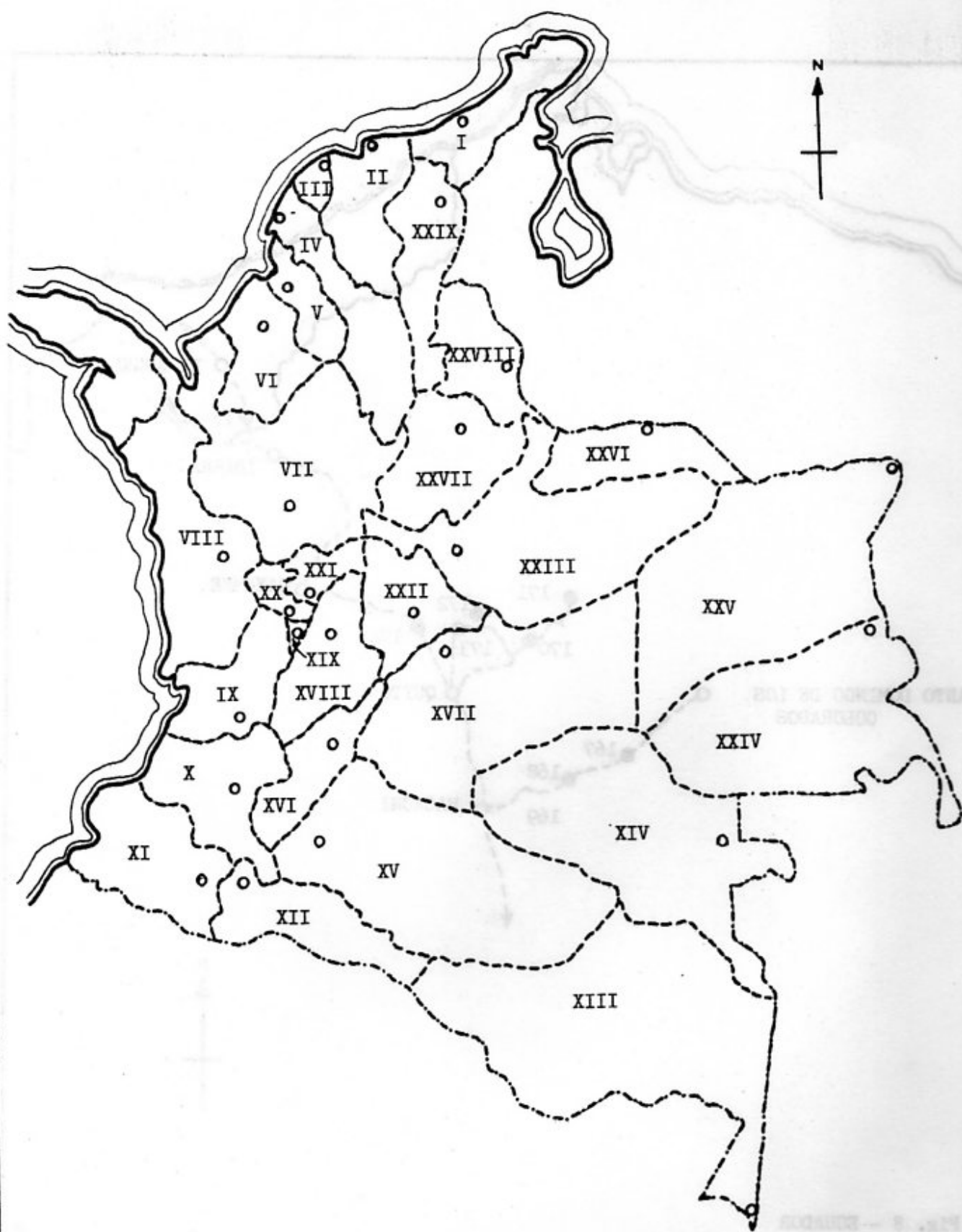


Fig. 9 - COLOMBIA

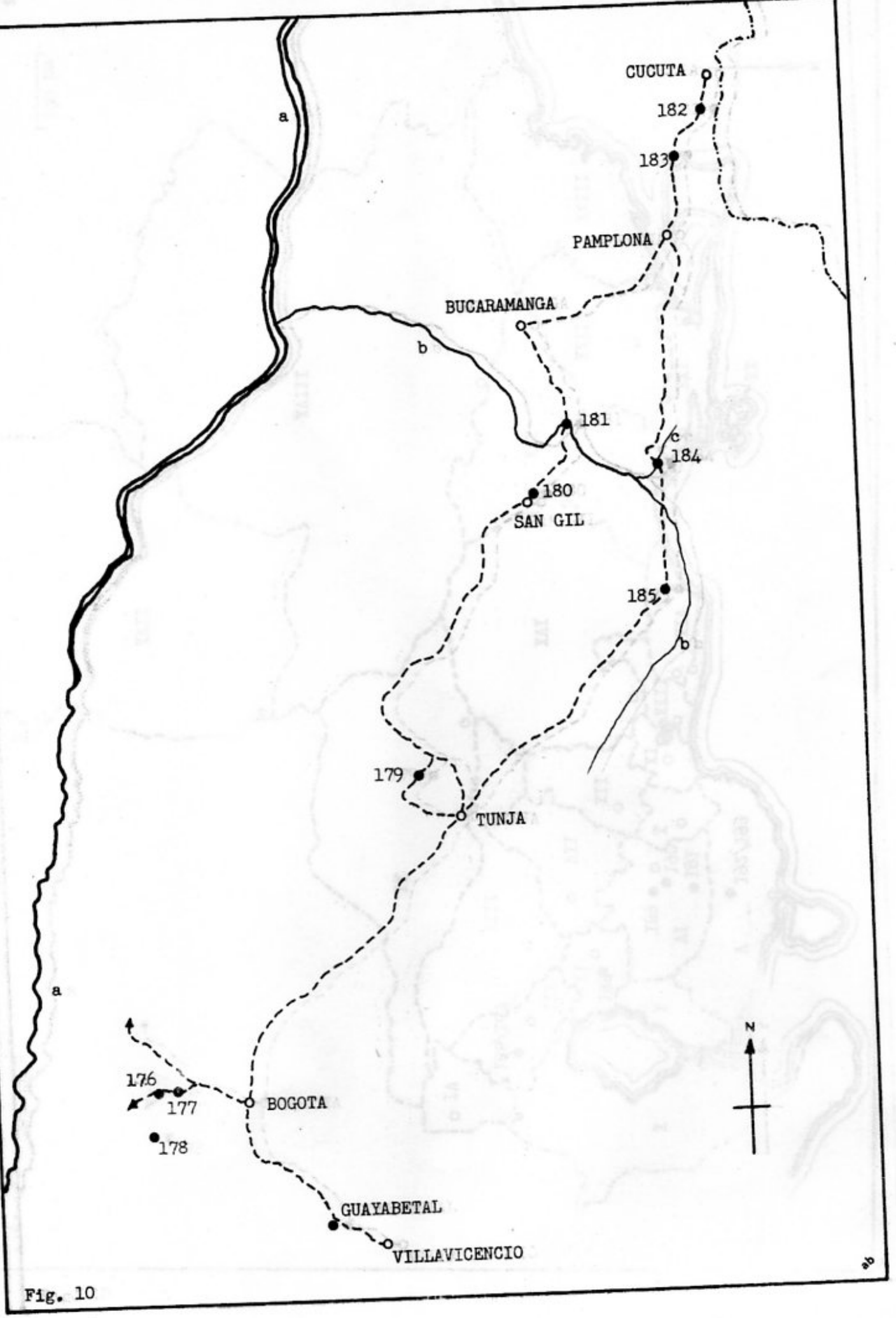


Fig. 10

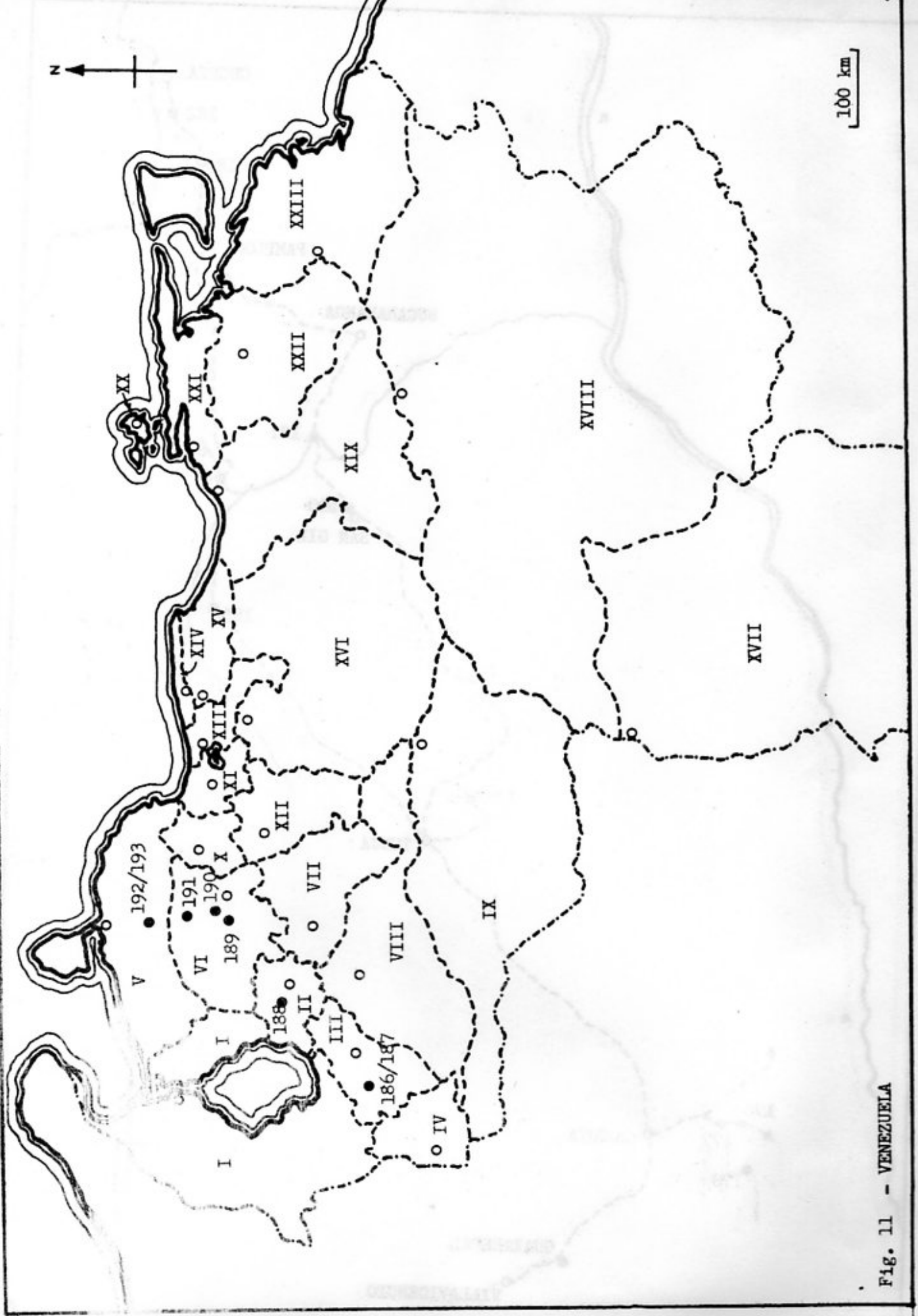


Fig. 11 - VENEZUELA

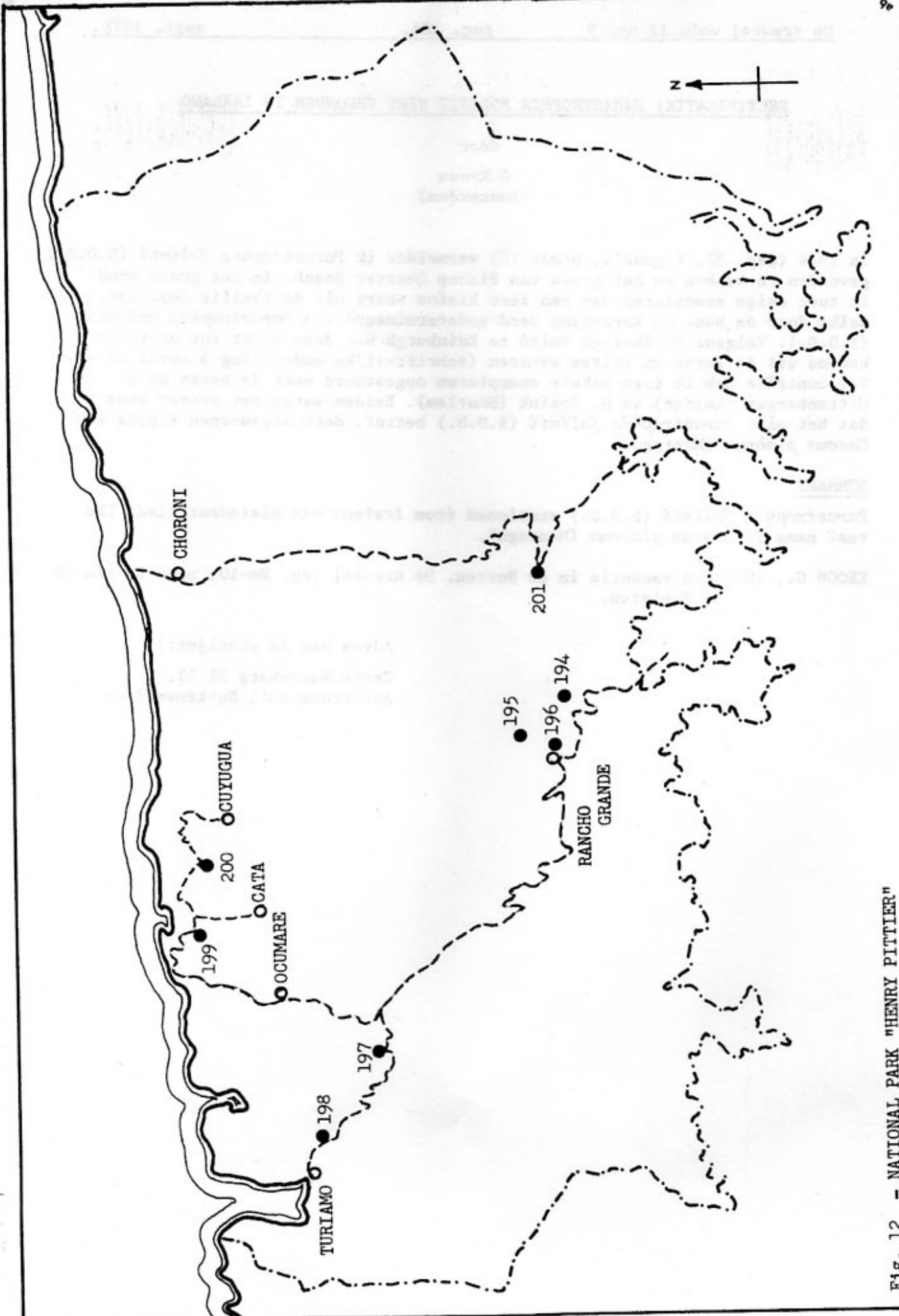


Fig. 12 - NATIONAL PARK "HENRY PITTIER"