1983 Grant-in-Aid for Scientific Research Reports by Grant-in-Aid for Overseas Scientific Survey

Kyoto University Overseas Research Reports of New World Monkeys IV

1983 Grant-in-Aid for Scientific Research Reports by Grant-in-Aid for Overseas Scientific Survey

Kyoto University Overseas Research Reports of New World Monkeys IV

Kyoto University Primate Research Institute 1984

1983 Grant-in-Aid for Scientific Research (Grant-in-Aid for Overseas Scientic Survey) Reports of Research Project

- 1. Number of Project 1982: 57041028, 1983: 57041028
- 2. Title of Project
 Phylogenetic Studies of South American Monkeys
- 3. Head Investigator

1982: Kyoto University, Primate Research Institute, Associate Professor, Yasuo Nogami 1983: Kyoto University, Primate Research Institute, Associate Professor, Yasuo Nogami

4. Cooperative Investigators

Kyoto University, Primate Research Institute, Associate, Takeshi Setoguchi Kyoto University, Primate Research Institute, Associate, Toshio Mouri Kyoto University, Primate Research Institute, Associate, Mitsuru Minezawa Kyoto University, Primate Research Institute, Research Assistant, Akira Hayashida Kyoto University, Primate Research Institute, Research Assistant, Masahito Natori

5. Finance

1982: 10,500,000 yen (Overseas Survey)

1983: 1,800,000 yen (Summary)

6. Results

Results of research are referred to following papers in this volume.

- 7. References
 - (1) NOGAMI, Yasuo & Yoneda, Masaaki: A Fundamental Structural Pattern of Enamel Prisms in the Supperfamily Ceboidea, *Primates* (in press).
 - (2) Nogami, Yasuo: Enamel Structure in the Superfamily Ceboidea, *Monkey*, No. 188, pp. 11–15, 1982.
 - (3) Setoguchi, Takeshi: Discovery of Monkeys' Graveyard—Paleontological Survey in Colobia—, *Kikan Jinruigaku*, Vol. 14, pp. 194–224.
 - (4) Setoguchi, Takeshi: Discovery of Monkeys' Graveyard from Colombia, South America, *Monkey*, No. 188, pp. 6–10.
 - (5) Mouri, Toshio: Pterion of Howler Monkeys, Monkey, No. 188. pp. 16-19.
 - (6) NATORI, Masahito: On the Morphology of the Upper Molars in *Cebus*, *Monkey*, No. 188, pp. 20–23.
 - (7) Nogami, Yasuo & Yoneda, Masaaki: A Fundamental Pattern of Enamel Structure in the Superfamily Ceboidea, 27th Primates Symposium of Japan Monkey Centre, 1983.
 - (8) Setoguchi, Takeshi: Some New Ceboid Primates from the La Venta Miocene of Colombia, South America, 43rd, Annual Meeting of Society of Vertebrate Paleontology (of America), 1983.
 - (9) Setoguchi, Takeshi: The Discovery of the "Monkeys' Graveyard" from Colombia, South America, 27th Primates Symposium of Japan Monkey Centre, 1983.
 - (10) Setoguchi, Takeshi: Saimiri and Cebus—Their Phyletic Relations—, 37th Meeting of Anthropological Society of Nippon, 1983.
 - (11) Mouri, Toshio: Variation of Pterion in *Alouatta*, 27th Primates Symposium of Japan Monkey Centre, 1983.
 - (12) MINEZAWA, Mitsuru: Cytogenetic Study on Bolivian New World Monkeys, 27th Primates Symposium of Japan Monkey Centre, 1983.

- (13) NATORI, Masahito: On the Structure of Upper Molars in Callithricidae, 37th Meeting of Anthropological Society of Nippon, 1983.
- (14) NATORI, Masahito: The Relationships between the Trigon and the Hypocone on the Upper Molars in *Cebus*, 27th Primates Symposium of Japan Monkey Centre, 1983.

PREFACE

I am very pleased that Kyoto University Overseas Research Reports of New World Monkeys are published here. This report constitutes of the results of Kyoto University Overseas Reseach of New World Monkeys operated in the field season of 1982. All the financial support needed was generously given by the Ministry of Education, Science and Culture of the Japanese Government.

The primatological researches in South America by Japanese scientists have been conducted since 1971. The Japan Monkey Centre organized the first expedition along the upper course of the Amazon River in 1971 under the anspices of the Japanese Government, and continued to send expeditions in 1973 and in 1975 as well. The main purposes of these expeditions were to research on social organization, behavioral pattern, diet and morphological characters of several South American monkeys. Primate Research Institute of Kyoto University decided to succeed the works of the Japan Monkey Centre and commenced to research in South America with two major purposes. The first one is just the continuation of the Japan Monkey Centre's program. And the second one is a paleontological program. This was a new one and by this the phylogenetical history of platyrrhines was tried to trace.

Kyoto University has sent primatological expeditions to South America five times already, including the preliminary research in the fiscal year of 1976. In 1977, the first large-scaled expedition was organized and made researches on both extinct and extant New World monkeys in Colombia, Peru, Bolivia and Brazil. In 1979, the second expedition was sent to Colombia and Bolivia. In that season, we succeeded in discovering the upper dentition of a ceboid monkey, *Stirtonia tatacoensis* of which lower dentition has solely been known in the La Venta badlands of Colombia. Comparing with recent material, it becomes clear that *Stirtonia* is a direct ancestor of extant *Alouatta*, howler monkeys. In the field season of 1981, geological work in the area where *Stirtonia* was obtained became the most important project for that year's research program.

In the field season of 1982, the phylogenetic studies of South American monkeys are more emphasized than in the preceding years. The paleontological and geological works are continued in Colombia and, on the other hand, the works are extended in Bolivia as well. The Salla area in Bolivia is one of the classical localities where the Early Tertiary primates are known. The results of the geological works in both areas are published here. The morphological and genetic analyses of South American monkeys are conducted. Especially in Bolivia, blood samples were collected from more than 500 individuals of six genera of *Saimiri*, *Aotus*, *Callicebus*, *Alouatta*, *Cebus*, *Saguinus*. The results of these works are also published here.

In Colombia, the paleontological work was continued and resulted in obtaining more than thirty isolated teeth of the middle Miocene primates from the same area as the *Stirtonia* was discovered in 1979. At least four genera and more than five species are involved in that collection. Three genera and three species of primates have long been known from the La Venta badlands, because these materials were collected by American paleontologists during 1940's. These specimens are, unfortunately, not in Colombia but in the United States of America (University of California, Berkeley, California). Dr. Setoguchi, chief paleontologist in our expedition, obtained a special research grant from the Japan Society of Promotion of Science to review the primate material from the La Venta badlands, for the fiscal year of 1983. His systematic study of these La Venta primates is now in progress and has not been completed so that his work is not included in this publication. His results will be published separately.

I am very indebted to INGEOMINAS, Museo de Historia Natural de Universidad Nacional, and the Japanese Embassy to Bogota (Colombia), and, Academia de Ciencias Naturales, Museo de Historia Natural, and the Japanese Embassy to La Paz (Bolivia).

Yasuo NOGAMI Professor

CONTENTS

| D | re | fa. | 00 |
|---|----|-----|----|
| | | | |

| Nogami, Yasuo and Yoneda, Masaaki |
|---|
| Patrones Estructurales del Esmalte en la Superfamilia Ceboidea |
| Setoguchi, Takeshi and Cadena, Alberto |
| Relacion Entre la Morfologia y la Funcion de la Dentadura en el Linaje Stirtonia- |
| Alouatta (Ceboidea)1 |
| Natori, Masahito |
| Caracteristicas Morfologicas de los Molares Superiores de los Monos Ardilla |
| (Saimiri) y Su Variacion Individual2 |
| Mouri, Toshio |
| A Morphological Analysis of the Pterion in Genus Alouatta |
| Mouri, Toshio |
| Analisis Morfologico del Pterion en la Genero Alouatta |
| Minezawa, Mitsuru and Valdivia C. Jaime |
| Cytogenetic Study of the Bolivian Titi and Revision of its Cytotaxonomic State39 |
| Minezawa, Mitsuru and Valdivia C. Jaime |
| Estudio Citogenetico del Titi Boliviano y Revision de su Posicion Taxonomica4 |
| Minezawa, Mitsuru and Valdivia C. Jaime |
| Cytogenetic Study of the Bolivian Monkeys: I. Preliminary Report on Karyotypes |
| of Cebus apella, Saimiri sciureus, Aotus azarae and Saguinus labiatus |
| Minezawa, Mitsuru and Valdivia C. Jaime |
| Estudio Citogenetico de los Micos Bolivianos: I. Report Preliminar de los |
| Cariotipos de Cebus apella, Saimiri sciureus, Aotus azarae y Saguinus labiatus69 |
| Hayashida, Akira Paleomagnetic Study of the Miocene Continental Deposits in La Venta Badlands, |
| Colombia |
| Hayashida, Akira |
| Estudio Paleomagnetico de los Depositos Continentales del Mioceno en las Tierras |
| Deserticas en la Venta, Colombia |
| Hayashida, Akira, Saavedra, Antonio and Rodorigo, Luis |
| Fission Track Dating and Paleomagnetic Study of the Cenozoic Continental |
| Deposits at Salla, Bolivian Andes |
| Hayashida, Akira, Saavedra, Antonio and Rodorigo, Luis |
| Datacion por Huellas de Fision y Estudio Paleomagnetico de los Depositos |
| Continentales Cenozoicos en Salla: Andes Bolivianos 99 |