

# 日本列島とロシア極東地方のオフィオライト岩類の 岩石学的比較研究

著者	石渡 明
著者別表示	Ishiwatari Akira
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# 2000 Fiscal Year Final Research Report Summary

## Comparative petrologic study of ophiolitic rocks in the Japanese Islands and Russian Far East

Research Project

### Project/Area Number

10640462

### Research Category

Grant-in-Aid for Scientific Research (C)

### Allocation Type

Single-year Grants

### Section

一般

### Research Field

Petrology/Mineralogy/Science of ore deposit

### Research Institution

Kanazawa University

### Principal Investigator

**ISHIWATARI Akira** Kanazawa University, Faculty of Science, Department of Earth Sciences Associate Professor, 理学部, 助教授 (90184572)

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1998 - 2000

### Keywords

ophiolite / the Inner Zone of Southwest Japan / Russian Far East / Sikhote Alin, Primorye / Omi-Renge metamorphic rocks / eclogitic blueschist / Tamba and North Kitakami belt / accreted greenstone

### Research Abstract

(1) Research in Japan. Western part of the Yakuno ophiolite exposed in the Kamigori area constitutes a crustal section of the late Paleozoic oceanic island arc. The coexistence of Ca-rich plagioclase and Fe-rich clinopyroxene in the metagabbro as well as highly depleted incompatible trace elements in amphibolite support this identification, which is also confirmed by the finding of shoshonitic rocks. We measured K-Ar age of hornblende from metacumulates of the Oeyama ophiolite, and confirmed their early Paleozoic age (400-440 Ma). We find eclogitic glaucophane schist from the Renge blueschist belt in the Omi area. This finding proves that the Renge metamorphism reached the eclogite facies. In the Jurassic accretionary complex of the North Kitakami belt in Aomori Prefecture, we find that the accreted volcanic rocks (greenstones) are mostly of ocean-island tholeiite origin. This clearly contrasts to the reported alkali basalt origin, which predominates greenstones in the southern Iwate Prefecture area, and proves magmatic diversity of the accreted seamounts.

(2) Research in Russia. The Elistratova ophiolite in Taigonos Peninsula at the southern edge of the Koryak Mountains shows peculiar occurrence, where a stratified sequence of an island-arc ophiolite intrudes into the oceanic mantle peridotite. Extreme diversity in the degree of depletion of mantle peridotite along the eastern coast of Taigonos Peninsula is also revealed. In Primorye, we find that the Cambrian Khanka ophiolite shows distinct "passive continental margin" occurrence clearly different from

## Research Products (18 results)

All Other  
All Publications

- [Publications] 石渡明: "西南日本内帯の古生代海洋性島弧地殻断片:兵庫県上郡変斑れい岩体"地質学論集. 52. 273-285 (1999) ▼
- [Publications] 斎藤大地,石渡明,辻森樹,宮下純夫,S.D.Sokolov: "ロシア極東,タイガノス半島のエリストラートバ・オフィオライト:海洋底マントルに貫入する島弧オフィオライト"地質学論集. 52. 303-316 (1999) ▼
- [Publications] 辻森樹,石渡明,坂野昇平: "西南日本内帯蓮華變成帯,青海町湯ノ谷のエクログジャイト質藍閃石片岩について"地質学雑誌. 106・5. 353-362 (2000) ▼
- [Publications] 辻森樹,仁科克一,石渡明,板谷徹丸: "西南日本内帯大江山地の普甲峠變成沈積岩に産する4~4.4億年含藍晶石緑れん石角閃岩"地質学雑誌. 106・9. 646-649 (2000) ▼
- [Publications] 三浦亮,石渡明: "北部北上帯,島守層に産する海洋島ソレイアイト起源緑色岩の岩石学"岩石鉱物科学. 52(印刷中). (2001) ▼
- [Publications] Shcheka,S.A.,Ishiwatari,A.,Vrzhosek,A.A.: "Geology and petrology of Cambrian Khanka ophiolite in Primorye (Far East Russia) with notes on its manganese-rich chromian spinel"地球科学. 55(印刷中). (2001) ▼
- [Publications] 石渡明,辻森樹: "日本海及びその周辺域の岩石"富山県企画部日本海政策課. 58 (2001) ▼
- [Publications] 「北陸の自然をたずねて」編集委員会(代表:石渡明): "北陸の自然をたずねて"築地書館. 242 (2001) ▼
- [Publications] Ishiwatari, A., Tsujimori, T., Hayasaka, Y., Sugimoto, T., and Ishiga, H.: "Nappe-bounding thrust faults in the Paleozoic-Mesozoic accretionary orogen in the Inner Zone of southwestern Japan."Jour.Geol.Soc.Japan. 105. III-IV (1999) ▼
- [Publications] Ishiwatari, A.: "Fragment of Paleozoic oceanic island arc crust in the Inner Zone of southwestern Japan : The Kamigori metagabbro body, Hyogo Prefecture."Mem.Geol.Soc.Japan. 52. 273-285 (1999) ▼
- [Publications] Tsujimori, T., Nishina, K., Ishiwatari, A.and Itaya, T.: "443-403 Ma kyanite-bearing epidote amphibolite from the Fuko Pass metacumulates in the Oeyama area, the Inner Zone of southwestern Japan."Jour.Geol.Soc.Japan. 106. 646-649 (2000) ▼
- [Publications] Tsujimori, T., Ishiwatari, A.and Banno, S.: "Discovery of eclogitic glaucophane schist from the Omi area, Renge metamorphic belt, the Inner Zone of southwestern Japan."Jour.Geol.Soc.Japan. 106. I-II (2000) ▼
- [Publications] Tsujimori, T., Ishiwatari, A.and Banno, S.: "Eclogitic glaucophane schist from the Yunotani valley in Omi Town, the Renge metamorphic belt, the Inner Zone of southwestern Japan."Jour.Geol.Soc.Japan. 106. 353-362 (2000) ▼
- [Publications] Miura, R.and Ishiwatari A.: "Petrology of the oceanic island tholeiite-origin greenstones in the Shimamori Formation, North Kitakami belt, northeastern Japan."Jpn.Mag.Min.Petr.Sci.. 30 (in press). (2001) ▼
- [Publications] Saito, D., Ishiwatari, A., Tsujimori, T., Miyashita, S., and Sokolov, S.D.: "Elistratova ophiolite in Taigonos peninsula, Far-East Russia : An island arc ophiolite intruding into oceanic mantle."Mem.Geol.Soc.Japan. 52. 303-316 (1999) ▼
- [Publications] Tsujimori, T., Saito, D., Ishiwatari, A., Miyashita, S and Sokolov, S.D.: "Electron microprobe image of zoned chromian spinel with hydrous mineral inclusions in a chromitite from Elistratova ophiolite, Far East Russia."Sci.Rep.Kanazawa Univ.. 43. 1-11 (1999) ▼
- [Publications] Ishiwatari, A.and Tsujimori, T.: "Paleozoic blueschist of Primorye, Russia."Jour.Geogr.(Tokyo). 108, No.2, (Pictorial 3). (1999) ▼
- [Publications] Shcheka, S.A., Ishiwatari, A.and Vrzhosek, A.: "Geology and petrology of Cambrian Khanka ophiolite in Primorye (Far East Russia) with notes on its manganese-rich chromian spinel."Earth Sci.(Chikyu Kagaku). 55 (in press). (2001) ▼

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