

Four New Species of *Pedicularis* from Karakorum

Takasi YAMAZAKI

Botanical Gardens, Faculty of Science, University of Tokyo
3-7-1 Hakusan, Bunkyo-ku, Tokyo 112, JAPAN

カラコルムからのシオガマギク属の4新種

山崎 敬

東京大学理学部附属植物園 112 東京都文京区白山 3-7-1

(Received on January 5, 1993)

Four new species of *Pedicularis*, *P. karakorumiana*, *P. mustanghatana*, *P. geniculata* and *P. kaghanensis* from Karakorum, are described.

I had an opportunity to study the materials of Scrophulariaceae collected by Georg Miehe, Sabine Miehe and other collaborators for the expedition of NE Karakorum in 1989 to 1991. Four new species of *Pedicularis* are found in the materials and described in this paper.

Pedicularis (ser. Sudeticae) ***karakorumiana***
Yamazaki, sp. nov. Fig. 1-A, Fig. 2.

Herba perennis, collo radices simplices crassas multas emittente, squamis reliquiis petiolorum dense praeditis. Caulis scapiformis, simplex, erectus, 5–9 cm altus, teres glabrous. Folia plerumque radicalia; petioli 2–4 cm longi, complanati, glabri; laminae lineari-lanceolatae, acutae, 1.5–4 cm longae, 3–8 mm latae, pinnati-sectae, utrinque glabrae, costis alato-striatis, segmentis 10–20-jugatis, ovatis acutis, serratis, serris 3–5, callosus-cuspidatis; folia caulina nulla vel 1–2 alterna, minora. Inflorescentia terminalis, sub-

capitata, circ. 2 cm longa, dense florifera. Bractee lanceolatae, obtusae or subacutae, 7–10 mm longae, irregulariter serratae, subdense albobilosae. Calyx tubulosus, circ. 15 mm longus, 5 mm latus, subdense pilosus, 5-lobatus, antice leviter fissus, lobo postico minimo, lanceolato, dentato, circ. 1.2 mm longo, lobis lateralibus ovatis circ. 2 mm longis, acutis, leviter cuspidato-dentatis. Corolla circ. 2 cm longa, purpurea (in siccatu), tubo circ. 1.3 cm longo, fere recto, parte superiore leviter curvato, dilatato; galea circ. 8 mm longa, parte verticali circ. 4 mm longa, 3 mm lata, parte antherigera circ. 4 mm longa et lata, rostro circ. 1 mm longo, bilobato, lobis deltoidibus aristato-acuminatis; labium inferum dilatatum, circ. 6 mm longum, 9 mm latum, 3-lobatum, lobo medio orbiculato, minore, circ. 2 mm longo et lato, lobis lateralibus late orbiculatis, circ. 4 mm longis, 5 mm latis, margine glabris. Stamina 4, filamentis glabris; antherae ellipticae, basi subautae.

Hab. Karakorum: North of Gilgit, Khunjerab, 4600 m (Grenze between Pakistan and Tibet) (Bosshard, Klotzli et Schaffner, July 8, 1989, no. 130/131-22, Typus TI, isotypus ZT). Upper Baru

Gah, south side of Panji Pass, above Holojust, 36°35'N/73°35'E, 3800 m (G. et S. Miehe, Sept. 13, 1991, no. 6907, TI).

This species resembles *P. uliginosa* Bunge in

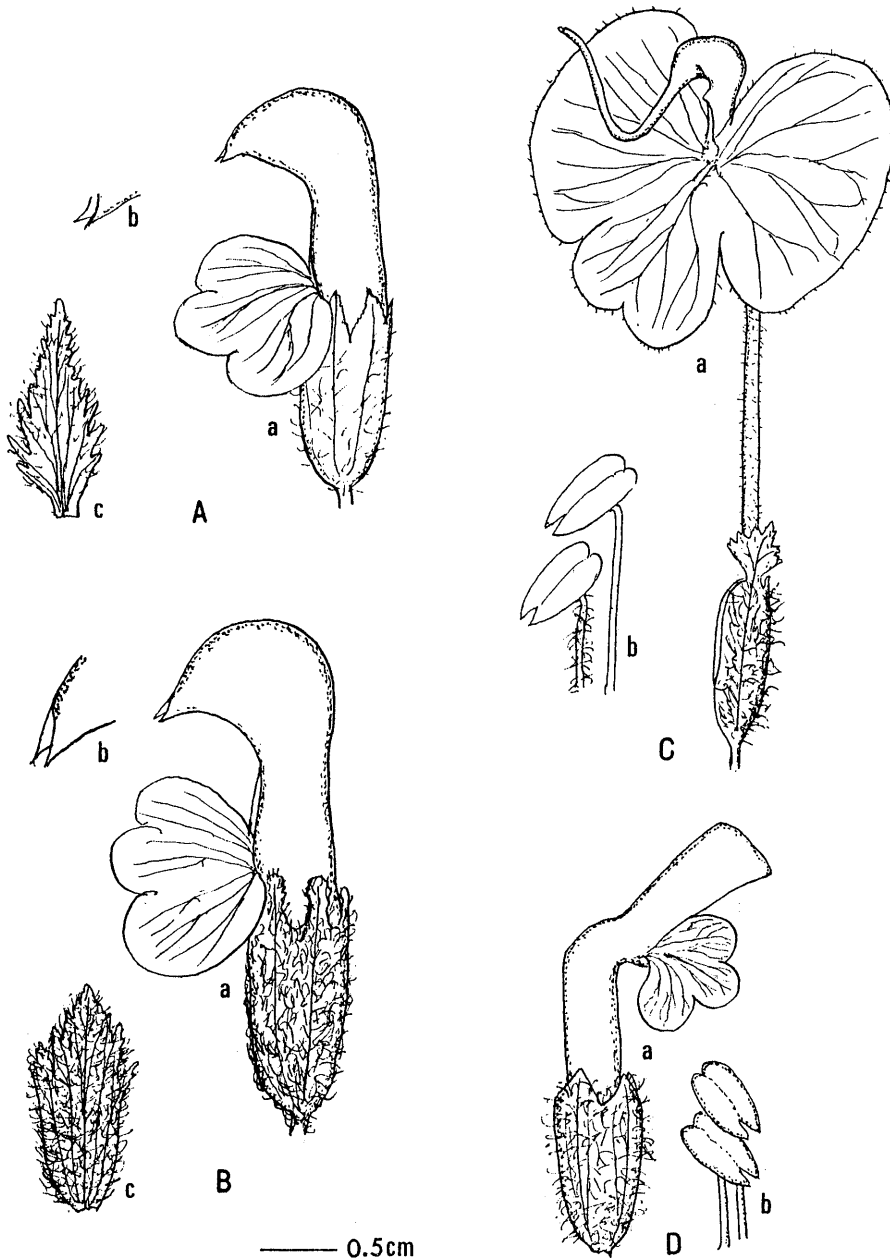


Fig. 1. A: *Pedicularis karakormina*. a, corolla. b, apex of galea. c, bract. B: *P. mustanghatana*. a, corolla. b, apex of galea. c, bract. C: *P. kaghanensis*. a, corolla, b, stamens. D: *P. geniculata*. a, corolla. b, stamens.

Pamir to Tien Shan, and *P. sudetica* Willd., especially subsp. *pacifica* Hultén in Alaska, Kamchatca and E. Siberia, but differs from the former by the deltoid, slightly cuspidate-dentate calyxlobes and the glabrous staminal-filaments and from the latter by the ovate segments of the leaves.

***Pedicularis* (ser *Sudeticae*) *mustanghatana* Yamazaki, sp. nov. Fig. 1-B, Fig. 3.**

Herba perennis, collo radices simplices carnosas multas emitente, squamis reliquiis petiolorum dense praeditis. Caulis erectus, scapiformis, simplex, 7-9 cm altus, efoliosus, teres, inferne

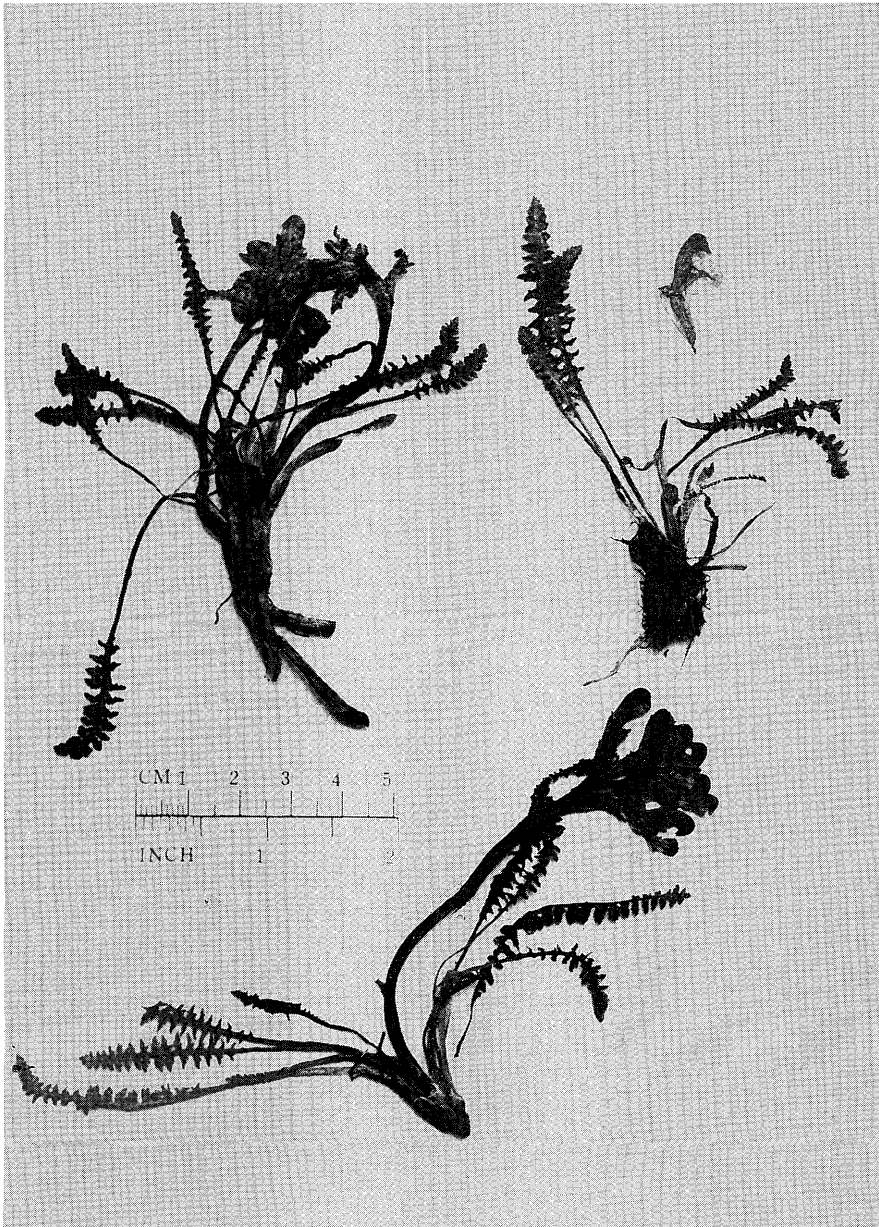


Fig. 2. *Pedicularis karakormiana* Yamaz. Type.

glabrescens, sursum apicem lanatus. Folia omnia radicalia; petioli 1.5–3 cm longi, complanati, glabri; laminae lanceolatae, 1.5–2.5 cm longae, 0.5–1 cm latae, acutae, pinnatisectae, utrinque glabrae, costis alato-striatis, segmentis 10–15-jugatis, inciso-lobatis, lobis callosis, acutis. Inflorescentiae terminales, breviter spicatae, 2–4 cm longae, densiflorae. Bracteae ellipticae, 5–13 mm longae, 4–7 mm latae, sessile, inferne integrae, medio apiceque irregulariter inciso-dentatae, dense albo-lanatae, lobis obtusis, callosio-dentatis. Pedicelli 1–5 mm longi, lanati. Calyx tubulosus, circ. 14 mm longus, 5 mm latus, dense lanatus, 5-lobatus, lobo antico leviter minore, lobis laterali-bus 3–4 mm longis, inferne integris, superne leviter dentatis. Corolla purpurea (in sicco), circ. 2 cm longa, tubo recto, circ. 10 mm longo, 3 mm

lato, glabro, labio inferiore circ. 7 mm longo, 10 mm lato 3-lobato, lobo medio orbiculato, circ. 4 mm longo et lato, lobis laterali-bus orbiculatis, circ. 5 mm longis et latis; galea erecta, circ. 11 mm longa, 3 mm lata, parte antherigera circ. 4 mm lata, lostro circ. 1 mm longo, bilobato, lobis deltoidibus aristato-acuminatis. Stamina 4, filamentis glabris, antheris ellipticis, circ. 3 mm longis, basi acutis.

Hab. Karakorum; Mustangh Ata Mt. W. flank, 4330 m, 38°17'N/78°00'E (G. et S. Miede, Jul. 7, 1991, no. 5523, Typus TI).

This species resembles *P. karakormiana* Yamaz., but differs by the elliptic, densely lanate bracts, dentate lobes, the larger corolla, the densely lanate calyx and the dentate lobes.

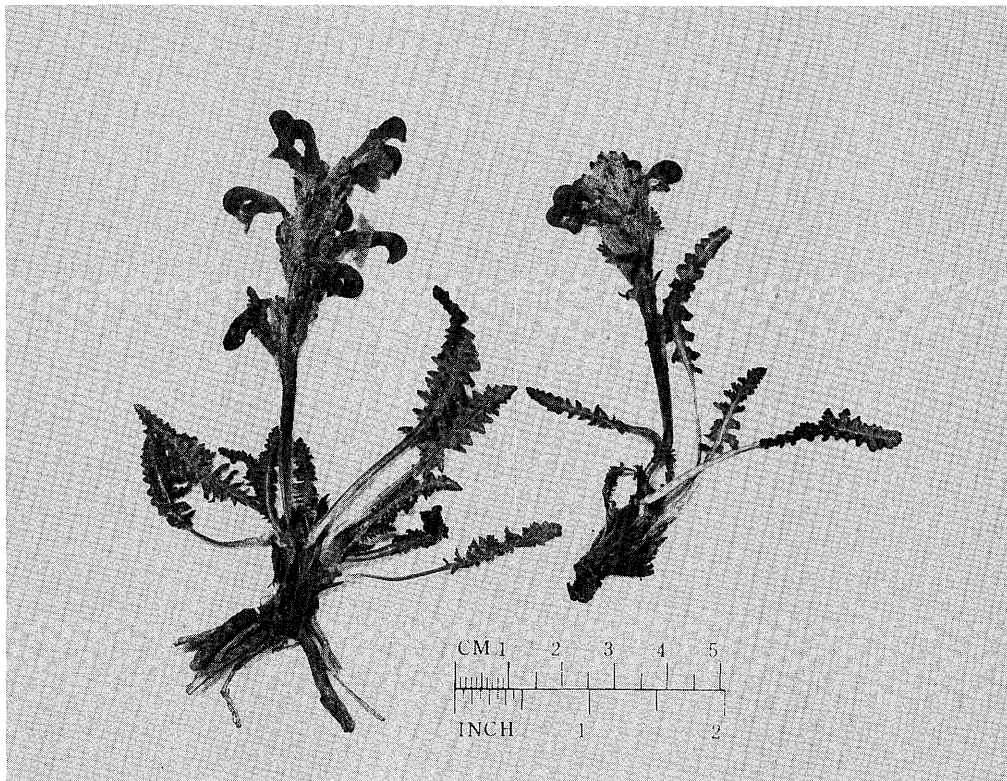


Fig. 3. *Pedicularis mustanghatana* Yamaz. Type.

Pedicularis (ser. *Gibberae*) **geniculata**
Yamazaki, sp. nov. Fig. 1-D, Fig. 4.

Herba annua. Caulis erectus, simplex vel basi
vix ramosus, 13–30 cm altus, plus minusve quad-
rangularis, striatus, bifariam crispato-pubescentes.

Folia 4-verticillata, lanceolata, 1.5–4 cm longa,
0.5–1 cm lata, pinnati-secta, breviter petiolata,
rachide circ. 1 mm lata, anguste alata, sparse
pilosa, laciniis 6–9-jugatis, oblongo-lanceolatis,
pinnati-partitis, apice calloso-acutis, lobis 1–2-

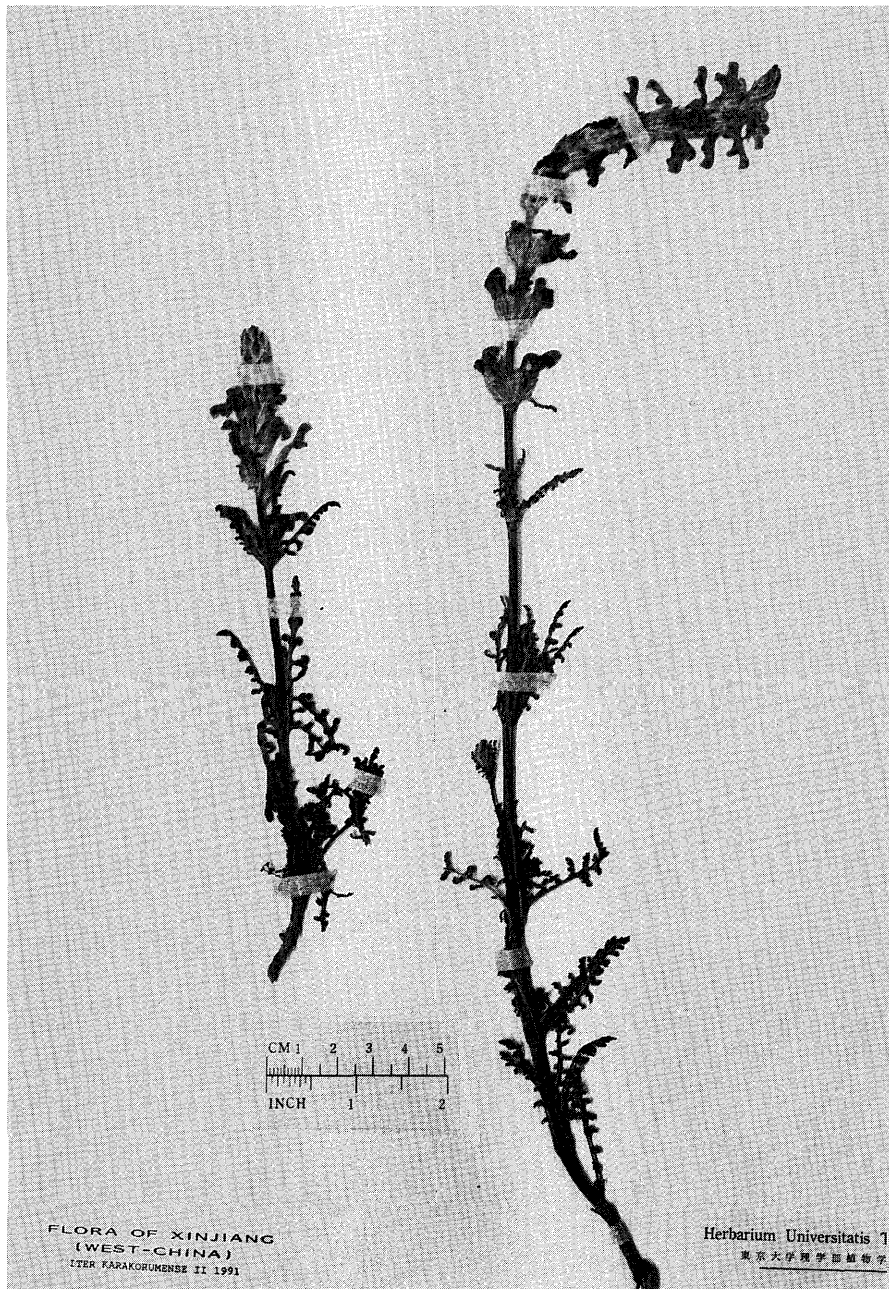


Fig. 4. *Pedicularis geniculata* Yamaz. Type.

serratis, callosis, utrinque glabris. Inflorescentia terminalis, spicata, 3–12 cm longa. Bracteae anguste ovatae, 6–10 mm longae, albo-lanatae, crenato-dentatae. Calyx tubulosus, membranaceus,

5-nervosus, circ. 9 mm longus, 4 mm latus, albo-lanatus, 4-lobatus, lobis deltoidibus, subacutis, circ. 2 mm longis, integris, apice atrovirentibus. Corolla circ. 2.5 cm longa, (in sicco lutescens),



Fig. 5. *Pedicularis kaghanensis* Yamaz. Type.

extus sparse glanduloso-punctata, tubo circ. 1.5 cm longo, 3 mm lato, recto, calyce subduplo-superante, ad apicem valde geniculato, labio inferne circ. 5 mm longo, 7 mm lato, 3-lobato, lobo medio leviter minore, circ. 2 mm longo et lato, lobis lateralibus orbiculatis circ. 2.5 mm longis et latis, margine glabris; galea recta, circ. 8 mm longa, in antherigera 3 mm lata, apice truncata, fronte subrotundata. Stamina 4, filamentis glabris, antheris oblong-ellipticis, circ. 2 mm longis, basi acutis.

Hab. Karakorum; SW of Mustangh Ata, 3000 m, steppe (G. et S. Miehe, July 21, 1991, no. 5250, Typus TI). ibid. 4000 m (G. et S. Miehe, Aug. 5, 1991, no. 5900 TI).

This species resembles *P. polygaloides* Hook f. in Sikkim, Bhutan and S. Tibet, but differs by the larger, stems and leaves, lower lip of the corolla with orbiculate lobes and the gales not porrect at apex.

Pedicularis (ser. Longiflorae) **kaghanensis**
Yamazaki, sp. nov. Fig. 1-C, Fig. 5.

Herba perennis. Caulis erectus, simplex, 40 cm altus, teres, crispato-pubescent. Folia plerumque caulina, alterna; petioli 1.5–7 cm longi, glabri; laminae oblongae, 3–7 cm longae, 1.5–3 cm latae, pinnati-partitae, segmentis 3–5-jugatis, ovatis, obtusis, lobatis, lobis mucronato-serratis, albo-callosis, utrinque glabris. Inflorescentia terminalis, spicato-racemosa, circ. 13 cm longa, laxa multi-florifera. Pedicelli glabrescentes, 5–15 mm longi, glabri. Bractee foliiformes, minores. Calyx tubulosus, circ. 10 mm longus, 2.5 mm latus, dense pilosus, antice ad 3/4 fissus, 3-dentatus, segmento postico minimo, subulato, integro, circ. 1 mm longo, 2 lateralibus late ovatis, inciso-serratis, circ. 2 mm longis et latis vel bilobatis, lobis inciso-serratis, circ. 2 mm longis, 1.5 mm latis, segmentis omnibus glabris. Corolla purpurea (in siccatu), tubo

glacile, 2–2.5 cm longo, extus breviter piloso, labio antico dilatato, circ. 10 mm longo, 15 mm lato, 3-lobato, lobo medio obovato, emarginato, circ. 7 mm longo, 8 mm lato, 2 lateralibus late orbiculatis, 7 mm longis, 10 mm latis, lobis omnibus margine leviter pilosis; galea parte verticali brevis circ. 3 mm longa, margine antice auriculata, parte antherigera circ. 3 mm longa, 2 mm lata, extus punctata, antice in rostrum tenue circ. 7 mm longum sigmoideum apice truncatum sensim abeuntia. Stamina 4, leviter didynama, filamentis posticis glabris, anticis subdense pilosis.

Hab. W. Pakistan; Hazara, Kaghan valley, Battakundi, 2650 m, river bank, in *Myrica* scrub. (U. Schickhoff, July 29, 1990, no. 1171, Typus TI).

This species resembles *P. hookeriana* Wall., but differs by the more lobed segments of the leaves, the densely pilose calyx, and the pilose anterior staminal filaments.

要 旨

ドイツの Göttingen 大学の Dr. Miehe 夫妻を中心として 1989 年から 1991 年にかけて、パキスタンのカラコルム北部の植物生態学調査が行われた。現在、コードラート内で採集した標本を、それぞれの専門家に依頼して種名の同定が行われている。私の所にはゴマノハグサ科の多数の標本が送られてきた。カラコルムは多くの植物調査が行われて、かなり解っている所であるが、中国国境に近い北部の方はあまり調査されていなかった。今回の資料の中でシオガマギク属の 4 種類が新種と考えられるので報告する。 *Pedicularis karakormiana* と *P. mustanghatana* とはパミールから天山山脈にかけて近縁の種類が報告されている。 *P. geniculata* はネパール、シッキム、チベット南部に 2 種類知られる特殊な群で、今回 3 番目の種類が知られたことになる。 *P. kaghanensis* はパキスタン中部以東、ネパール中部までに分布する *P. hookeriana* Wall. に近縁のものである。