

NEW OR IMPERFECTLY KNOWN SPECIES OF EARTHWORMS. NO. 2.

By SEITATO GOTO and SHINKICHI HATAI.

First High School, Tokyo.

In this paper we propose to describe some more species of *Perichaeta* that have come into our hands since the publication of our last paper. Most of the species have been collected in the western part of the Island of Shikoku and of the Main Island. A few, however, are from the vicinity of Tokyo and of Mito.

The following points are common to all the species here described, and are therefore omitted from the text: (1) Ovaries in segment XIII; (2) Testes in X and XI; (3) Last heart in XIII.

18. *Perichaeta irregularis*, n. sp.

Of this singular species we have fifty-five specimens, and the following figures represent the modal numbers† obtained by examination of the mean-sized individuals. Length 125 mm., breadth 6 mm.; number of segments 95. Number of setæ in VII, 47, in VIII, 47, in XVII, 61, and more posteriorly varying within narrow limits on either side of the last number. Clitellum XIV—XVI, without setæ. Oviduct pores in XIV, very distinct. No spermathecae, no genital papillae; *sperm duct pores could not be observed*. First dorsal pore in XII/XIII.

Gizzard in VII and VIII; intestine begins in XV, with five pairs of cœca in XXVI, of which the length decreases gradually towards the ventrum, the longest one reaching segment XXIII. Thickened septa VI/VII—VII/VIII and X/XII—XIII/XIV. Sperm reservoirs comparatively large, in XI and XII. Ovaries and ovisacs large.

The most salient character of this species lies in the total absence of spermathecae. Of the species hitherto described we know a similar condition only in *P. acystis* Beddard. This author had only two specimens and he appears to have had some doubt as to whether they were not abnormal. The same doubt also occurred to us

† Numbers occurring most frequently.

at first; but an examination of a sufficient number of specimens has convinced us that the character in question is constant and therefore normal to the species. The present species differs from *P. acystis* in the absence of prostatic glands, and the sperm ducts terminating with knob-like swellings in XXII or much forward in XIV.

Loc.—Uwajima (Shikoku), Takahashi (Prov. Bitchū).

19. *P. Iizukai*, n. sp.

We take great pleasure in naming this species after our friend, Mr. AKIRA IIZUKA, to whom we owe the specimen.

Length 235 mm. of which 48 mm. is occupied by the first thirteen segments, breadth in I—II, 6 mm., more posteriorly 12—15 mm., the portion containing the genital organs being thickest; number of segments 137. Chaetal lines very salient in the

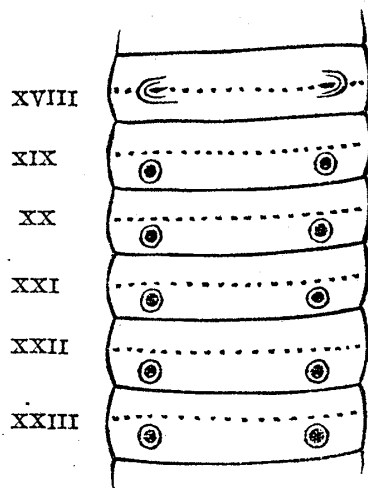


Fig. 1.

anterior part. Setae decreasing towards the anterior segments, there being 34 in IV, 40 in V, 42 in VI, 45 in VII, 50 in VIII, and 60 or so in the more posterior segments. The segments in the middle portion of the body are only 1 mm. long, but in the anterior ones are as long as 5 mm. Clitellum XIV—XVI, without setae. Spermathecal pores four pairs, in V/VI, VI/VII, VII/VIII, and VIII/IX, very small and difficult to recognize. No genital papillae in this region. Male pores in XVIII, separated by 8 setae, and opening on tops of papillae. Segments XIX—XXIII each with a pair of genital papillae

about 1 mm. in diameter, lying in the same longitudinal lines with the male pores, and situated behind the chaetal lines (fig. 1). First dorsal pore in XII—XIII.

Gizzard in VIII and IX; intestine beginning in XV, without ceca. Thickened septa IV/V—VII/VIII and X/XI—XII/XIII: septa VIII/IX and IX/X wanting. Sperm reservoirs in XI and XII, Spermathecae four pairs, in VI, VII, VIII, IX, 8 mm. long; main sac elongated and pointed at its blind end; appendage shorter (fig. 2). No ovisac. Ovaries comparatively large. Prostate glands small, lobate, confined to XVIII.

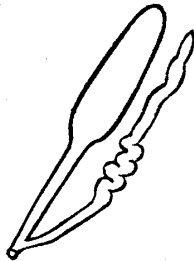
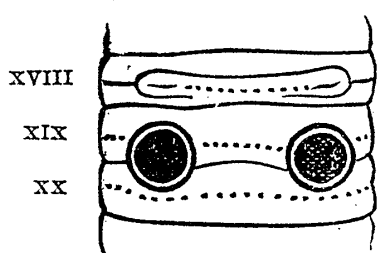


Fig. 2.

Loc.—Musashi.

20. *P. shimaënsis*, n. sp.

One specimen preserved in formol. Length 205 mm., breadth 7 mm., of a dark flesh color; number of segments 163. Setæ very numerous, there being about 85 in the genital segments. Clitellum XIV—XVI. Intersegmental lines very distinct and of a darker color than the rest. Spermathecal pores four pairs, in V/VI, VI/VII, VII/VIII, VIII/IX, about midway between the median line and the lateral margin;



no genital papillæ in this region. Male pores in XVIII, separated by 13 setæ. One pair of very large circular genital papillæ, with flat tops, of the diameter of about 2.5 mm., in XIX, situated mainly behind the chætal line and projecting into the next segment (fig. 3). First dorsal pore in XII/XIII.

Fig. 3.

Gizzard in VIII, IX; intestine beginning in XV, with a pair of cœca in XXVI, extending as far anteriorly as XX. Thickened septa V/VI—VII/VIII and X/XI—XII/XIII; septa VIII/IX and IX/X wanting. Genital organs comparatively small. Spermathecæ four pairs, in VI, VII, VIII, IX, with a winding appendage and a pyriform main sac. Sperm reservoirs in XI. XII. Ovaries tolerably large; no ovisac. Prostate glands in XVII—XX.

Loc.—Shima; collected by Mr. IIZUKA.

21. *P. carnosa*, n. sp.

Two specimens presenting a difference of some importance in the genital papillæ around the male pores. We shall base our description on the larger specimen, which is also provided with more genital papillæ.

Length 153 mm., breadth 7–8 mm., number of segments 106. Setæ about 55

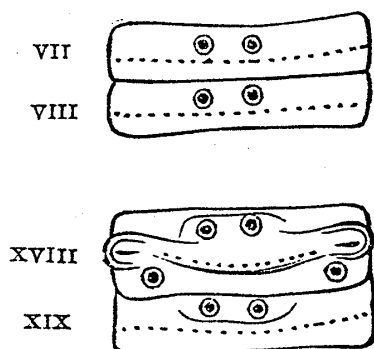


Fig. 4.

in the spermathecal region. Spermathecal pores three pairs, in V/VI, VI/VII, VII/VIII; segments VII, VIII, with a pair of genital papillæ near the median line, in front of the chætel lines (fig. 4). Male pores in XVIII, close to the lateral margin, separated by 14 setæ, opening on low, large papillæ projecting outwards when seen from the ventral side. Segments XVIII with two pairs of genital papillæ, an inner and outer; the inner pair lying close to the median line and in front of the chætal line, the outer close to

the male pores, internal to them, and behind the chaetal line; segment XIX with one pair of genital papillæ exactly similar in position to the inner pair of the preceding segment (fig. 4). First dorsal pore in XIII/XIV.

In the smaller specimen in our possession measuring 143 mm. by 5 mm., and with 126 segments, the two pairs of papillæ near the male pores, lying close to the median line are absent. In all other respects, however, it is exactly like the larger specimen. We therefore regard the point just mentioned as an individual variation.

Gizzard in VIII, IX; intestine beginning in XV, with one pair of cæca in XXVI, extending as far anteriorly as XXIII. Thickened septa IV/V—VII/VIII and X/XI—XIV/XV; septa VIII/IX and IX/X wanting. Spermathecae three

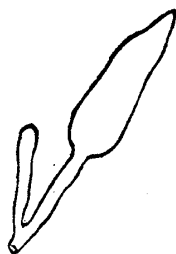


Fig. 5.

Loc.—Tokyo

pairs, in VII, VIII, IX, with straight appendages half as long as the main sac and duct (fig. 5). Sperm reservoirs in XI, XII, with dorsal surface divided into three lobes. Ovisac present. Prostate glands large, in XVI—XX. Internally there is a large glandular patch of a circular form in the median line, lying equally in segments XVIII and XIX, and therefore corresponding to the region surrounded by the genital papillæ already described.

22. *P. acincta*, n. sp.

Two specimens of the same dimensions, but with different number of segments. Length 130 mm., breadth 7 mm.; number of segments 108 and 113. *Clitellum absent*, segments XIV—XVI being exactly similar to the others and bearing setæ. Oviduct pore exceedingly small and difficult to recognize. Setæ about 50 in the spermathecal segments, and about 60 in the more posterior segments; segment XIV with 57 setæ, XV with 57, XVI with 52. Spermathecal pores three pairs, in V/VI, VI/VII, VII/VIII; no genital papillæ in this region. Male pores in XVIII,

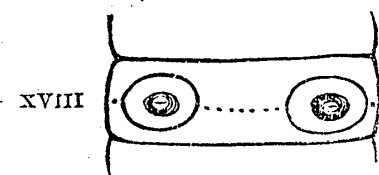


Fig. 6.

separated by 7 setæ, each situated in the centre of a circular concavity about 1.5 mm. in diameter, and opening on top of papillæ (fig. 6). No genital papillæ in this region. First dorsal pore in XII/XIII.

Gizzard in VIII, IX; intestine beginning in XV, with one pair of cæca in XXVI, extending for two segments anteriorly. Thickened septa V/VI, VII/VIII and X/XI—XIII/XIV; septa VIII/IX, IX/X wanting.

Spermathecae three pairs, in VI, VII, VIII, with appendicular diverticula twice as long as the main portion. Sperm reservoir in XI, XII. Ovisac absent. Prostate glands lobate, in XVII—XIX.

Loc.—Tokyo.

23. *P. agrestis*, n. sp.

Length 100—160 mm., breadth 5—8 mm., number of segments 80—96. Clitellum XIV—XVI, without setae. Number of setae in the spermathecal region 36, more posteriorly 40 or so. Spermathecal pores three pairs, in V/VI, VI/VII, VII/VIII. There are no genital papillae in this region; but there are two pairs of slightly elevated squarish patches of a light brown color inside the spermathecal pores, one in VII and the other in VIII. A similar patch or patches are present in *P. Masatake* Bed. and *P. Hilgendorfi* Mich., and in these species there are numerous small papillae on the external surface of the patches, on which the so-called "capsulogenous glands" open; but in the present species there are no papillae on the outside nor any capsulogenous glands on the inside. We think, however, that these patches serve the same purpose as the genital papillae. No male pores could be observed. First dorsal pore in XII/XIII.

Gizzard in VIII, IX; intestine beginning in XV, with one pair of caeca in XXVII bearing 7 pairs of secondary diverticula. These secondary diverticula are longest next the dorsum and thence gradually decrease in length towards the ventrum, the longest ones reaching as far anteriorly as segment XXIV. Thickened septa V/VI—VI/VII and X/XI—XIV/XV; septa VIII/IX—IX/X wanting. Spermathecae



Fig. 7.

three pairs, in VI, VII, VIII, with diverticula longer than the main sac, but almost straight or very slightly winding (fig. 7.) Sperm reservoir in XI, XII. Ovisac present. Prostate gland absent. Sperm ducts asymmetrical and terminating with bulbular swelling either in segment XIII or XVIII or even more posteriorly.

Loc.—Takahashi (Prov. Bitchu), Tokorosawa (Prov. Musashi), Ôarai (Prov. Hidachi).

Among more than one hundred specimens of this species in our hands we find some in which the first dorsal pore lies in XI/XII, and a few without the modified patches above described, as also a few with a pair of large papillae (of 0.8–1 mm. in diameter), in front of the chaetal line in segment XVIII. All these variations, which occur independently, were found in the specimens from Ôarai.

24. *P. parvicystis*, n. sp.

Observations made on 45 specimens. Length about 140 mm., breadth 7 mm.; number of segments 90 or so. Number of setae in the spermathecal region usually 40. Clitellum XIV—XVI, without setae. Spermathecal pores two pairs, on tops of papillae near the anterior margins of segments VII, VIII (fig. 8). On the intersegmental

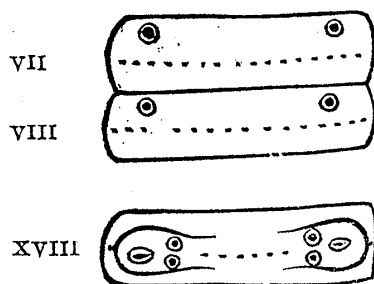


Fig. 8.

lines VI/VII, VII/VIII, in the same longitudinal lines with the spermathecal pores, there are one or two minute papillae on either side; these are the openings of the "capsulogenous glands." No genital papilla in this region. Male pores in XVIII, sometimes on top of papillae, separated by 14 setae. Genital papillae mostly two pairs, directly inside the male pores, one on either side of the chætal line. In a few specimens there are an additional pair of papillae directly behind the male pores. On these papillae open the capsulogenous glands described below. First dorsal pore X/XI.

Gizzard in VIII, IX; intestine beginning in XV, with one pair of cœca in XXVI, reaching segment XXI. The external margins of the cœca are frizzled?. Thickened septa V/VI—VII/VIII and X/XI—XIII/XIV, septa VIII/IX—IX/X wanting. Spermathecae two pairs, in VII, VIII, with diverticula (fig. 8 a). On the inner side of the spermathecae there are some

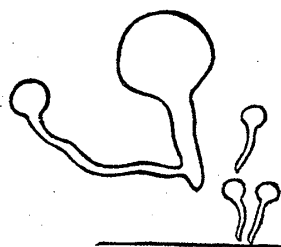


Fig. 8 a.

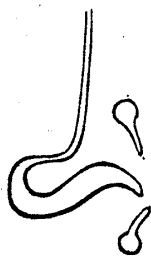


Fig. 8 b.

"capsulogenous glands" of inconstant position, usually three on either side.† Sperm reservoirs in XI, XII. Ovisac present. No prostate gland. Two capsulogenous glands near each male pore, one in front of and the other behind it (fig. 8 b.) ‡

Loc.—Uwajima (Shikoku), Ôarai (Prov. Hidachi).

25. *P. glandularis*, n. sp.

Length 150 mm., breadth 6 mm.; number of segments 104. Dorsal side

‡ A similar condition of the cœcum is found in *P. digitata* Ben. and *P. bonthaimensis* Ben. both from Celebes.

† These so-called "capsulogenous glands" are probably of the same nature as the "accessory spermathecae" which we have found in several of the species described by us in our first paper.

‡ ROSA writes of *P. hawayana*, "An der inneren Seite desselben (male pore) findet man zwei his

banded, the intersegmental lines being of a chestnut color (SACCARDO) and the rest of a light flesh color; ventral side uniformly colored, the same as the light colored portions of the dorsal side. Number of setæ in the spermathecal region usually 60. Clitellum XIV—XVI, without setæ. Spermathecal pores two pairs, in VI/VII, VII/VIII. There are no genital papillæ in this region, but there is instead a slightly elevated modified patch of the integument of an elliptical form, of the diameter of about 1.3 mm. on the median line of segment VII (fig. 9). In this patch there are 16 small papillæ, on which open the "capsulogenous glands." Sometimes the posterior

borders of the spermathecal pores are surrounded by similar papillæ, in which case the patches occupied by them are also modified. These papillæ are also the openings of "capsulogenous glands." Male pores in XVIII, separated by 19 setæ, of a transverse slit-like form, on top of papillæ. There is a large circular concave papilla of the diameter of about 1 mm. on the

median line in segment XVIII, close to its anterior border and even projecting into the preceding segment; in its centre is a small papilla on which open some "capsulogenous glands" (fig. 9). First dorsal pore in XII/XIII.

Gizzard in VIII, IX; intestine beginning in XV, with six pairs of cœca in

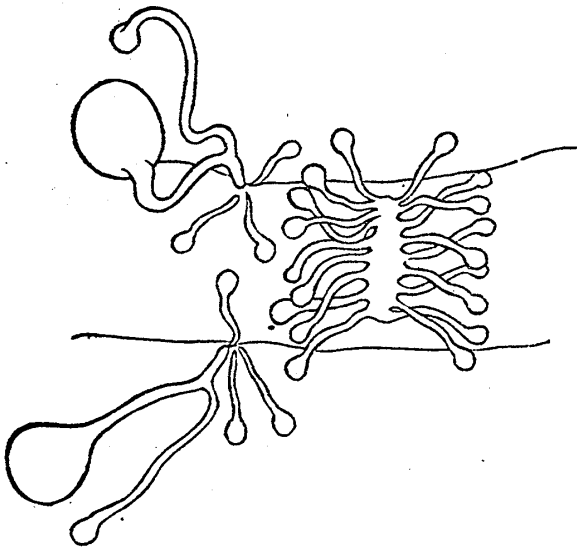


Fig. 10.

XXVII. Thickened septa IV/V—VI/VII and X/XI—XIII/XIV; septum VII/VIII exceedingly thin; septa VIII/IX, IX/X wanting. Sperm reservoir in XI, XII. Ovisac present. Spermathecae two pairs, in VII, VIII, with diverticula longer than the main portion and opening near the middle of its tubular portion. "Capsulogenous glands" exceedingly well developed: one group of 8 pairs in the median line in segment VII (fig. 10), similar to what obtains in *P. Rokugo* Bed. ‡; another

drei kleine birnförmige, gelappte Drüsen, welche den äusseren Geschlechtspapillen entsprechen" (Die exotischen Terricolen des K.K. naturhist. Hofmuseums, Wien, 1891).

‡ Beddard, F.—On some Perichætidæ of Japan. Zool. Jahrb., Abthl. f. Syst., VI/93. P. 762.

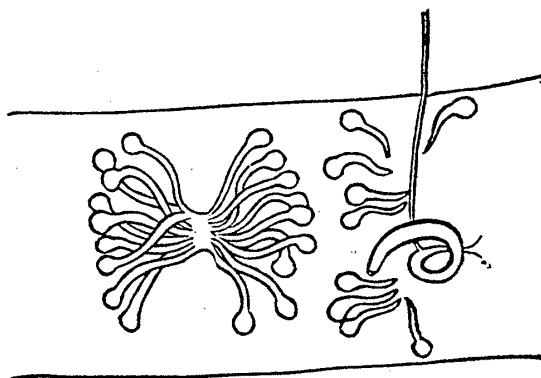


Fig. 11.

the absence of papillæ. Prostate glands well developed, lobate, in XVII—XX.

Loc.—Takahashi (Prov. Bitchū).

group of 2–8 glands close to the opening of each spermatheca; a third group of 9 pairs on either side of the ventral cord between the male pores; and a fourth group of 8–9 glands close to each male pore (fig. 11.) The openings of the glands associated with the spermathecal and male pores are very difficult to recognize from the outside, owing to

26. *P. levis*, n. sp.

Length 85 mm., breadth 4.5 mm.; number of segments 88. In alcoholic specimens dark brown on the dorsal side, whitish on the ventral side. Number of setæ in the spermathecal region 45, posterior to the clitellum 48. Clitellum pale yellowish, XIV—XVI, without setæ. Spermathecal pores two pairs, in VI/VII, VII/VIII, surrounded by small papillæ, the openings of glands, which, however, are often absent. Male pores difficult to recognize with the naked eye. No genital papillæ either near the spermathecal or male pores. First dorsal pore in XI₁/XIII.

Gizzard in VIII, IX; intestine beginning in XV, with 5 pairs of cœca decreasing in length towards the ventrum in XXVII, the longest of which reach segment XXV. Thickened septa V/VI—VI/VII and X/XI—XII/XIII; septa VIII/IX, IX/X

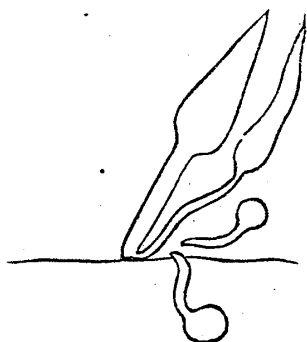


Fig. 12.

wanting. Spermathecae two pairs, in VII, VIII; main sac pyriform; diverticulum consisting, like the main sac, of a thin-walled sac-like portion and a thick-walled duct. Two whitish "capsulogenous glands" close to each spermathecal opening, similar in shape to those of *P. Hilgendorfi* Mich. (fig. 12). Sperm reservoir in XI, XII. Ovary and ovisac very large, lying close to the ventral wall. No prostate gland. Male ducts terminating, as in the allied species, with a knob-like swelling more frequently in a

segment anterior or posterior to XVIII and only very rarely in the latter.

Loc.—Takahashi (Prov. Bitchū), Kumamoto (Kyushū).

27. *P. vesiculata*, n. sp.

Length 60—105 mm., breadth 3—5 mm., number of segments 75—92. Setæ 65 in the spermathecal region, 77 in XIII, these numbers, however, varying according to individuals; more crowded on the ventral side, there being only 17—23 on the dorsal side and 42—48 on the ventral side, in the spermathecal region. Clitellum XIV—XVI, without setæ. Spermathecal pores two pairs, in VI/VII, VII/VIII; no genital papillæ near them. Male pores in XVIII, of the shape of transverse slits, close to the lateral margin of the body; no genital papillæ near them (fig. 13). First dorsal pore in XII/XIII.

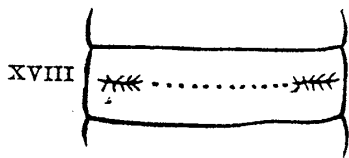


Fig. 13.

Gizzard in VIII, IX; intestine beginning in XVI, with one pair of cæca with 4 pairs of secondary diverticula in XXVI; of these diverticula the dorsal ones are

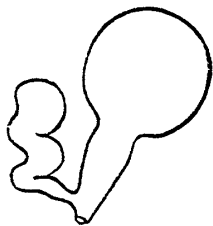


Fig. 14.

longest and reach segment XXIII. Septa all thin, none of them being especially thickened; septa VIII/IX, IX/X wanting. Spermathecae two pairs, in VII, VIII, with spherical sacs and short ducts; diverticula shorter than the main portion but convoluted (fig. 14). Sperm reservoir in XI, XII, lobed. Ovary and ovisac comparatively large.

Prostate gland somewhat rectangular, in XVII—XIX. Sperm duct with a terminal sac (fig. 15).

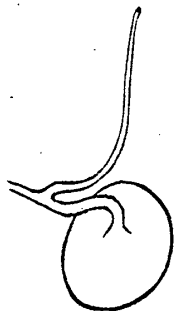


Fig. 15.

Externally this species closely resembles *P. sexta* Benham, but differs from it in the position of the first dorsal pore, in the number of setæ between the male pores, and several internal characters.

Loc.—Takahashi (Prov. Bitchū), Ôarai (Prov. Hidachi).

28. *P. megascolidioides*, n. sp.

A very large specimen 240 mm long and 15 mm. wide in the thickest portion; number of segments 118. Number of setæ in the spermathecal region 48. Clitellum very prominent, XIV—XVI, brownish in color, with a chætal line to each segment,

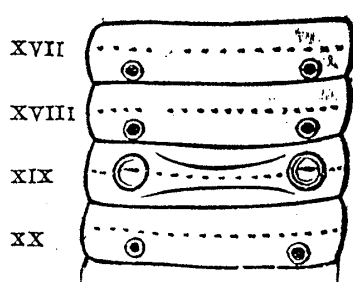


Fig. 16.

although there are no setæ. Spermathecal pores 5 pairs, in IV/V—VIII/IX, externally invisible. Oviduct pore irregularly depressed. *Male pores in XIX*, separated by 13 setæ, and about 6.5 mm. apart. One pair of genital papillæ about 0.5 mm. in diameter in segments XVII, XVIII, XX, close to the posterior borders of the segments (fig. 16). First dorsal pore in XII/XIII.

Gizzard in VIII, IX; intestine beginning in XV, with one pair of cœca in XXVII, reaching as far anteriorly as XXIII. Thickened septa V/VI—VII/VIII; and X/XI—XII/XIII; septa VIII/IX, IX/X wanting. Spermathecae five pairs, in V—IX; main sac elongated ovate, with a pointed apex; diverticulum tubular and convoluted in its distal half, as long as the main portion. Sperm reservoir in XI, XII, small. Ovary large; ovisac absent. Prostate gland large, in XVIII—XXI, divided by deep incisions into three parts, with lobed margin. The genital organs are conspicuously small as compared with the large dimension of the body.

The single specimen representing this species belongs to the Science College, and we have been enabled to examine it through the kindness of Prof. MITSUKURI.

Loc.—Tokyo (collected by Mr. WADA of the Central Meteorological Observatory, within its compound).

Postscript.

After the foregoing part of this paper had been written we received from Dr. HORST of Leyden a copy of his paper † entitled, "On *Perichæta Sieboldi* Horst," in which the author makes some remarks on the species which we provisionally identified with the species first described by him from Japan. We are very glad that our Dutch friend has taken the trouble of reexamining his type specimen, and are much indebted for his courtesy in sending us his paper. We must also acknowledge his kindness in pointing out some misprints that have crept into our table; and we beg those who have our first paper to correct them accordingly, viz. column "Spermathecae," line 1, read *VI, VII, VIII, IX* instead of *V, VI, VII*; same column, line 2, read *VIII, IX* instead of *VI, VII, VIII*; column "Prostate," line 5, read *O* instead of *XVIII*.

There is one point of misunderstanding in Dr. HORST's paper which we may dispose of at the outset. At its end he says that we have not met with any of the nine species described by previous writers from this country. We beg to remark that this

† Notes from the Leyden Museum, Vol. XX, pp 240—242.

is not so, and that we have not made any statement to that effect. We have headed our paper, "New or Imperfectly Known Species, etc.," and it was not our intention to redescribe the species which we thought had been sufficiently well described. As a matter of fact *Perichæta Ijime* Rosa, *P. japonica* Horst, and *P. Sieboldi* Horst are the only species already described which we have not yet come across.

We have not minutely described our species because its characters were exactly similar to those of *P. Sieboldi* except in the points specified by us, viz. the position of the spermathecæ and the number of setæ. As, however, Dr. HORST's reëxamination of his type specimen has confirmed these differences, we find it necessary to regard the species in question as new, and we propose for it the name of

29. *Perichæta communissima*, n. sp.

Length 250 mm. or sometimes more, breadth 9 mm.; number of segmets 140 in the largest individuals; those measuring about 190 mm. and with about 100 segments being, however, the most frequent. Clitellum XIV—XVI, without setæ. Number of setæ in the spermathecal region about 60. Spermathecal pores in V/VI, VI/VII, VII/VIII. Male pores in XVIII, on top of papillæ, separated by 14—19 setæ. No genital papillæ. First dorsal pore in XII/XIII.

Gizzard in VIII, IX; intestine beginning in XV, with 6—7 or exceptionally up to 9 pairs of cœca* in XXVI, the size of which gradually decreases from the dorsum towards the ventrum. Thickened septa V/VI—VII/VIII and X/XI—XIII/XIV; septa VIII/IX and IX/X wanting in most specimens, although we have observed a few specimens in which septum VIII/IX was present but exceedingly thin. Spermathecæ three pairs, in VI, VII, VIII; main pouch spherical and voluminous; diverticulum winding in its central part, longer than the main portion. Sperm reservoirs large, in XI, XII, dorsal surface lobate. Ovisac in XIII, dorsal to the ovary. Prostate gland very well developed, in XVII—XIX, trilobed, the middle lobe being smallest, and all the three lobes with numerous lobules. Last heart in XIII.

Lo.—Tokyo, Sendai, Tsugaru (south side of the Strait of Sangar), Shizuoka, Ibaraki, Bitchū; that is to say all over the Main Island.

After this description it is hardly necessary to remark that the present species can not be identified with *P. Ijime* Rosa.

* The most dorsal cœcum is prominently larger than the others, and is slightly separated from them; but this is the case in all the species with numerous cœca that we have observed, viz. in *P. Hilgendorfi*, *P. Masatakæ*, *P. divergens*, *P. schizopora*, *P. irregularis*, *P. glandularis*, and *P. levis*.

	Length mm.	Breadth mm.	No. of segments.	Setae in spermatheca.	Setae between male pores.	Clitellum.	Genital papillae.	Spermathecae.	First dorsal pore.	Last heart.	Recept. ovorum.	Prostate.	Termin. sac.	Gizzard.	Commence. intestine.	Intestinal coeca.	Thickened septa.
<i>P. irregularis</i>	125	6	95	vii, viii = 47 xvii = 51	—	xiv—xvi	0	0	xii/xiii	xiii	xiii	0	0	vii, viii	xv	xxvi	vi/vii—vii/viii. x/xi—xii/xiv.
<i>P. Izukai</i>	235	14	137	34—50	8	"	xix, xx, xxi, xxii, xxiii	vi, vii, viii, ix	xii/xiii	"	0	xviii	0	viii, ix	"	0	iv/v—vii/viii. x/xi—xii/xiii.
<i>P. shimadensis</i>	205	7	163	85	13	"	xix	vi, vii, viii, ix	xii/xiii	"	0	xvii—xx	0	"	"	xxvi	v/vi—vii/viii. x/xi—xii/xiii.
<i>P. carnosa</i>	153	7.5	106	55	14	"	vii, viii, xviii, xix	vi, vii, viii	xiii/xiv	"	xiii	xvi—xx	0	"	"	"	iv/v—vii/viii. x/xi—xiv/xv.
<i>P. acincta</i>	130	7	108	50	7	0	0	vi, vii, viii	xii/xiii	"	0	xvii—xix	0	"	"	"	v/vi—vii/viii. x/xi—xii/xiv.
<i>P. agrestis</i>	160	8	96	36	—	xiv—xvi	0	vi, vii, viii	xii/xiii	"	xiii	0	0	"	"	xxvii	v/vi—vi/vii. x/xi—xiv/xv.
<i>P. parvicystis</i>	140	7	90	40	14	"	xviii	vii, viii	x/xi	"	"	0	0	"	"	xxvi	v/vi—vii/viii. x/xi—xii/xiv.
<i>P. glandularis</i>	150	6	104	60	19	"	vii, xviii	vii, viii	xii/xiii	"	"	xvii—xx	0	"	"	xxvii	iv/v—vi/vii. x/xi—xii/xiv.
<i>P. levis</i>	85	4.5	88	45—48	—	"	0	vii, viii	xii/xiii	"	"	0	0	"	"	"	v/vi—vi/vii. x/xi—xii/xiii.
<i>P. vesiculata</i>	60—105	3—5	75—92	65	12	"	0	vii, viii	xii/xiii	"	"	xvii—xix	Present.	"	xvi	xxvi	No specially thick- ened septa.
<i>P. megascolidioides</i>	240	15	118	48	13	"	xvii, xviii, xx	v, vi, vii, viii, ix	xii/xiii	"	0	xviii—xxi	0	"	xv	xxvii	v/vi—vii/viii. x/xi—xii/xiii.
<i>P. communissima</i>	250	9	140	60	14—19	"	0	vi, vii, viii	xii/xiii	"	"	xvii—xix	0	"	"	xxvi	v/vi—vii/viii. x/xi—xii/xiv.