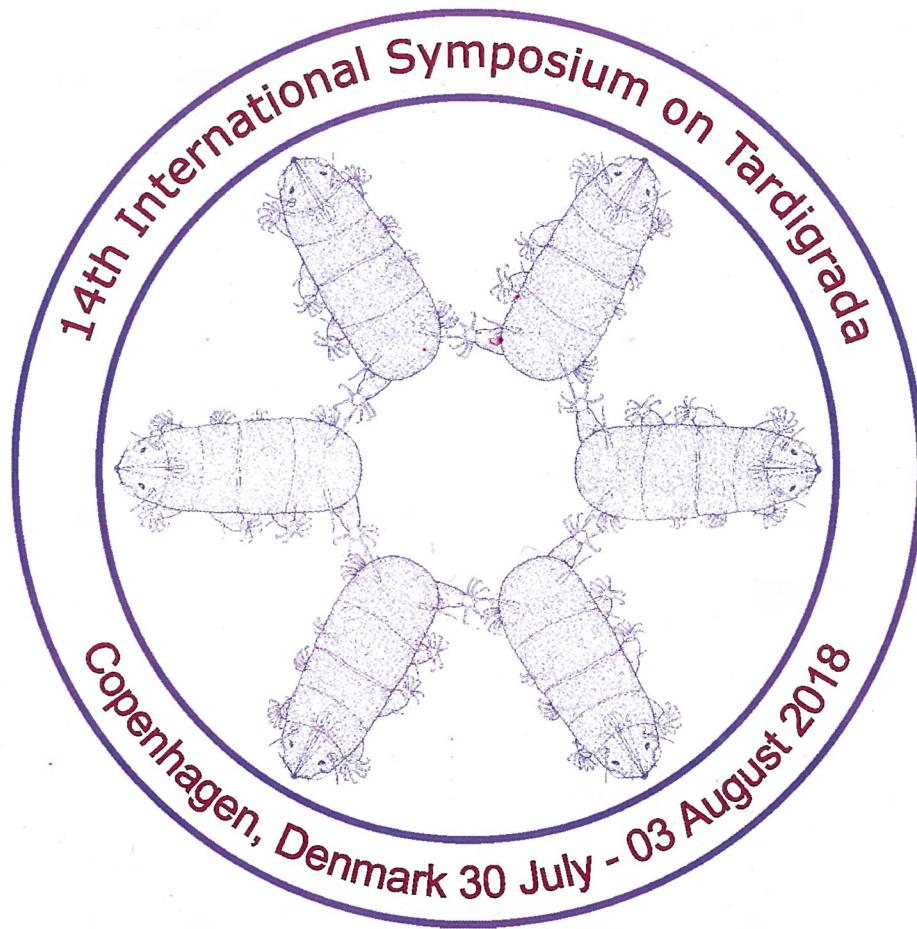


WELCOME TO TARDIGRADA 2018
14TH INTERNATIONAL SYMPOSIUM ON TARDIGRADA

CONFERENCE PROGRAM



COPENHAGEN BIOCENTER, DENMARK • www.tardigrada2018.org

UNIVERSITY OF COPENHAGEN
FACULTY OF SCIENCE



Taxonomy, Phylogeny & Evolution

- S1.P1.** J.-H. KIHM, S. KIM & T.-Y. S. PARK - A new species of *Dactylobiotus* (Parachela, Eutardigrada) from King George Island, Antarctica (*J.-H. Kihm is a Young Scientist Award contestant*)
- S1.P2.** Ł. KACZMAREK, R. GUIDETTI, M. K. JAGADEESH & M. ROSZKOWSKA - New tardigrade species from India and the problems with taxonomic status of *Macrobiotus occidentalis* Murray, 1910
- S1.P3.** Ł. KACZMAREK, F. SMITH, M. ROSZKOWSKA & P. BARTELS - A possible new genus of Heterotardigrada
- S1.P4.** A. KULPA, T. BARTYLAK, D. GROBYS, M. KEPEL, A. KEPEL, H. KMITA, M. ROSZKOWSKA & Ł. KACZMAREK - Two new *Echiniscus* species or only one? (*A. Kulpa is a Young Scientist Award contestant*)
- S1.P5.** R. BERTOLANI, M. CESARI, I. GIOVANNINI, L. REBECCHI, R. GUIDETTI, Ł. KACZMAREK & G. PILATO - The *Macrobiotus polonicus-persimilis* group (Eutardigrada, Macrobiotidae), another example of problematic species identifications in tardigrades
- S1.P6.** D. GROBYS, M. ROSZKOWSKA, H. KMITA, I. PARNIKOZA & Ł. KACZMAREK - Challenging taxonomy of *Pseudechiniscus suillus* complex (*D. Grobys is a Young Scientist Award contestant*)
- S1.P7.** H. GREVEN & H. DASTYCH - Ferdinand Richters (1849–1914) – a major “tardigradologist” at the beginning of the 20th century
- S1.P8.** P. GASIOREK & Ł. MICHALCZYK - Phylogeny of Itaquasconinae in the light of new integrative analyses and the discovery of a new genus from Borneo (*P. Gąsiorek is a Young Scientist Award contestant*)
- S1.P9.** P. GASIOREK & Ł. MICHALCZYK - Deceptive conservatism of claws: distinct phyletic lineages hidden within the Isohypsibioidea (Eutardigrada: Parachela) (*P. Gąsiorek is a Young Scientist Award contestant*)
- S1.P10.** D. J. ISAAK & G.T. GROTHMAN - *Apodibius confusus* in Fish Creek Provincial Park, Alberta, Canada
- S1.P11.** H. MINATO, K. SUGIURA, M. MATSUMOTO & A.C. SUZUKI - Morphological and phylogenetic analyses of *Milnesium* cf. *tardigradum* found in Japan (*H. Minato is a Young Scientist Award contestant*)
- S1.P12.** Ł. KRZYWAŃSKI, D. STEC & Ł. MICHALCZYK - An integrative description of *Richtersius coronifer* (Richters, 1903) from the original *locus typicus* in Spitsbergen (*Ł. Krzywański is a Young Scientist Award contestant*)
- S1.P13.** B.D. LÓPEZ-SANDOVAL, G. MONTIEL-PARRA & T.M. PÉREZ - Preliminary study of the tardigrades of La Malinche National Park, Tlaxcala, Mexico (*B.D. López-Sandoval is a Young Scientist Award contestant*)
- S1.P14.** L.A.M. ITANG, M.A. MAPALO, D. STEC, Ł. MICHALCZYK & D. MIRANO-BASCOS - A discovery and phylogenetic analysis of a putative novel species of a limnoterrestrial tardigrade from Diliman, Quezon City, Philippines
- S1.P15.** Ł. MICHALCZYK, D. STEC, P. GASIOREK, W. MOREK, P. KOSZTYŁA, K. MICHNO, K. ZAWIERUCHA & Z. PROKOP - Are one-to-one morphometric comparisons reliable in tardigrade species identification?
- S1.P16.** S. Neitzel & E. Perry - A reevaluation of *Diphascoen pingue brunsvicense* (*S. Neitzel is a Young Scientist Award contestant*)
- S1.P17.** M. ROSZKOWSKA, D. GROBYS, K. ZAWIERUCHA, H. KMITA & Ł. KACZMAREK - Clarification of taxonomic status and geographic distribution of *Echiniscus merokensis* Richters, 1904 *sensu lato* in the light of integrative taxonomy (*M. Roszkowska is a Young Scientist Award contestant*)
- S1.P18.** M. ROSZKOWSKA, D. STEC, M. KEPEL, A. KEPEL, T. BARTYLAK, A. KULPA, H. KMITA & Ł. KACZMAREK - Remarks and updated key to the genus *Mesobiotus* Vecchi, Cesari, Bertolani, Jönsson, Rebecchi & Guidetti, 2016 (Eutardigrada, Macrobiotidae) and description of a new species from the Republic of Madagascar (*M. Roszkowska is a Young Scientist Award contestant*)

THE NEW SPECIES OF *DACTYLOBIOTUS* (PARACHELA, EUTRADIGRADA) FROM KING GEORGE ISLAND, ANTARCTICA

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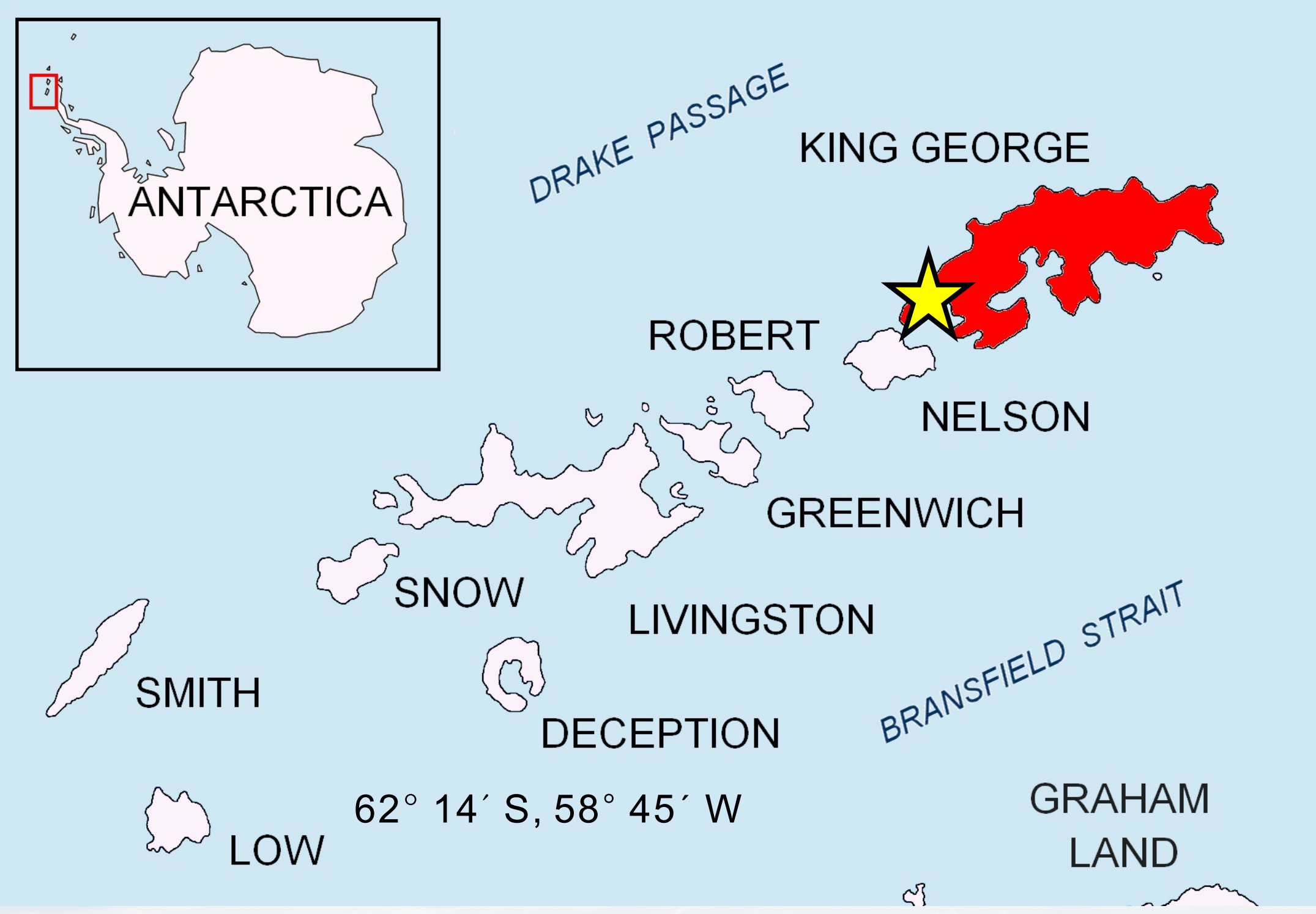
³Division of Polar Life Sciences, Korea Polar Research Institute, Incheon, Korea



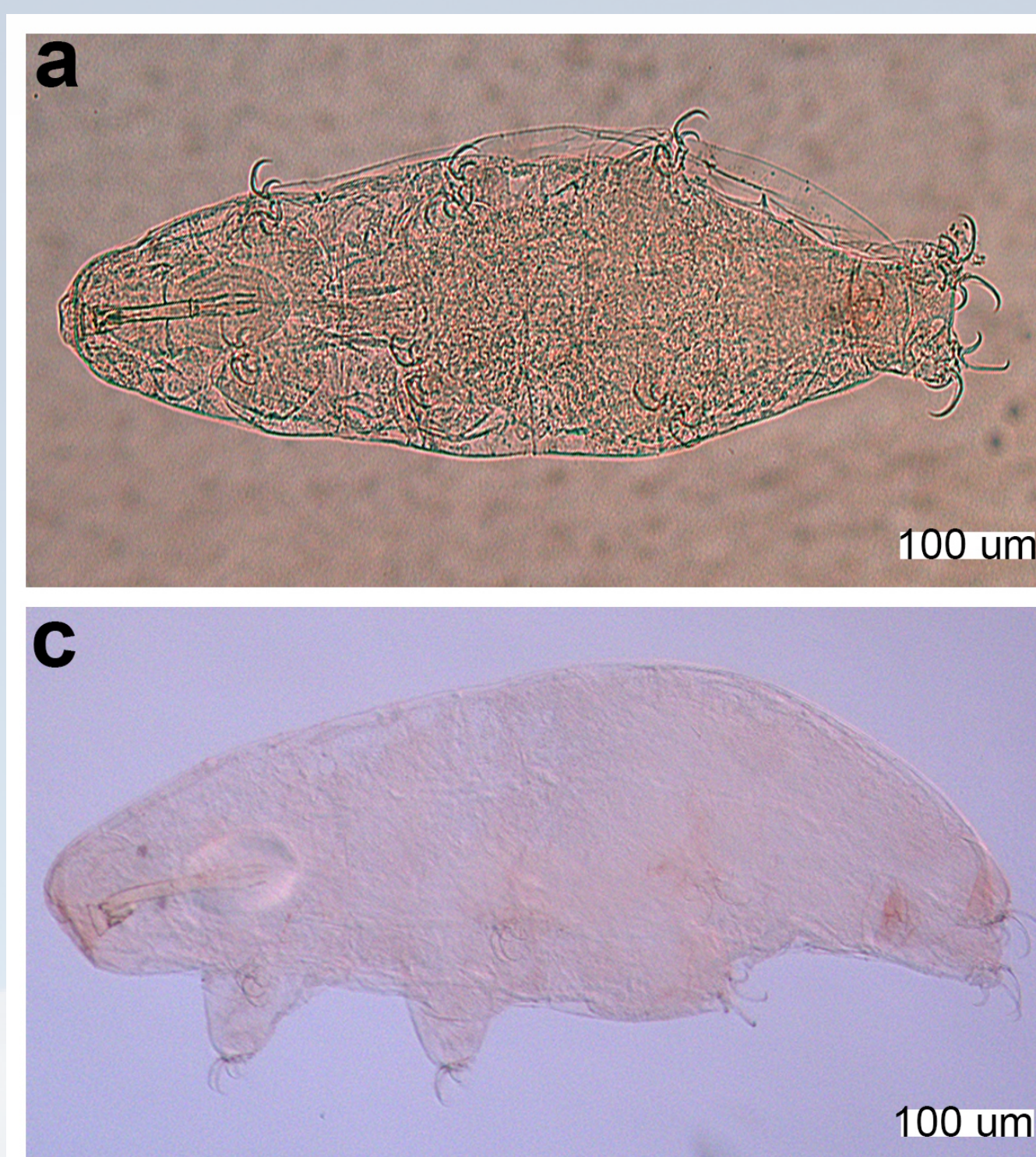
Limno-terrestrial tardigrades form one of the most dominant groups in the scanty terrestrial freshwater ecosystem of Antarctica. However, due to their limited key morphological characters and restricted access to the habitats, taxonomic study on Antarctic tardigrades largely remains to be challenged. KOPRI ecology team collected several species of tardigrades near the King Sejong Station, King George Island, Antarctica during 2014-2015 season.

Among the collected tardigrades, one group shows a buccal-pharyngeal apparatus with ten peribuccal lamellae, and the cuticle structure which joins two claws in each limb. These characters warrant a generic assignment *Dactylobiotus*. This species is quite large in size (600-700 μm) with prominent eyespots and smooth cuticle. The egg has circular or slightly hexagonal cone-type processes with a tip. Compared to *D. ambiguus* and *D. caldarellai* which have a rather similar morphology, this species shows claws with longer primary branch at all limbs. The 18S, 28S rDNA and cytochrome c oxidase subunit 1 (CO1) sequences do not correspond to any previously-reported sequence, although only limited molecular data of tardigrades have been reported so far. Based on the pt-ratio of the buccal-pharyngeal apparatus and claws, the morphology of eggs, and the DNA sequences of 3 partial genes, this species is considered as a new species of *Dactylobiotus*.

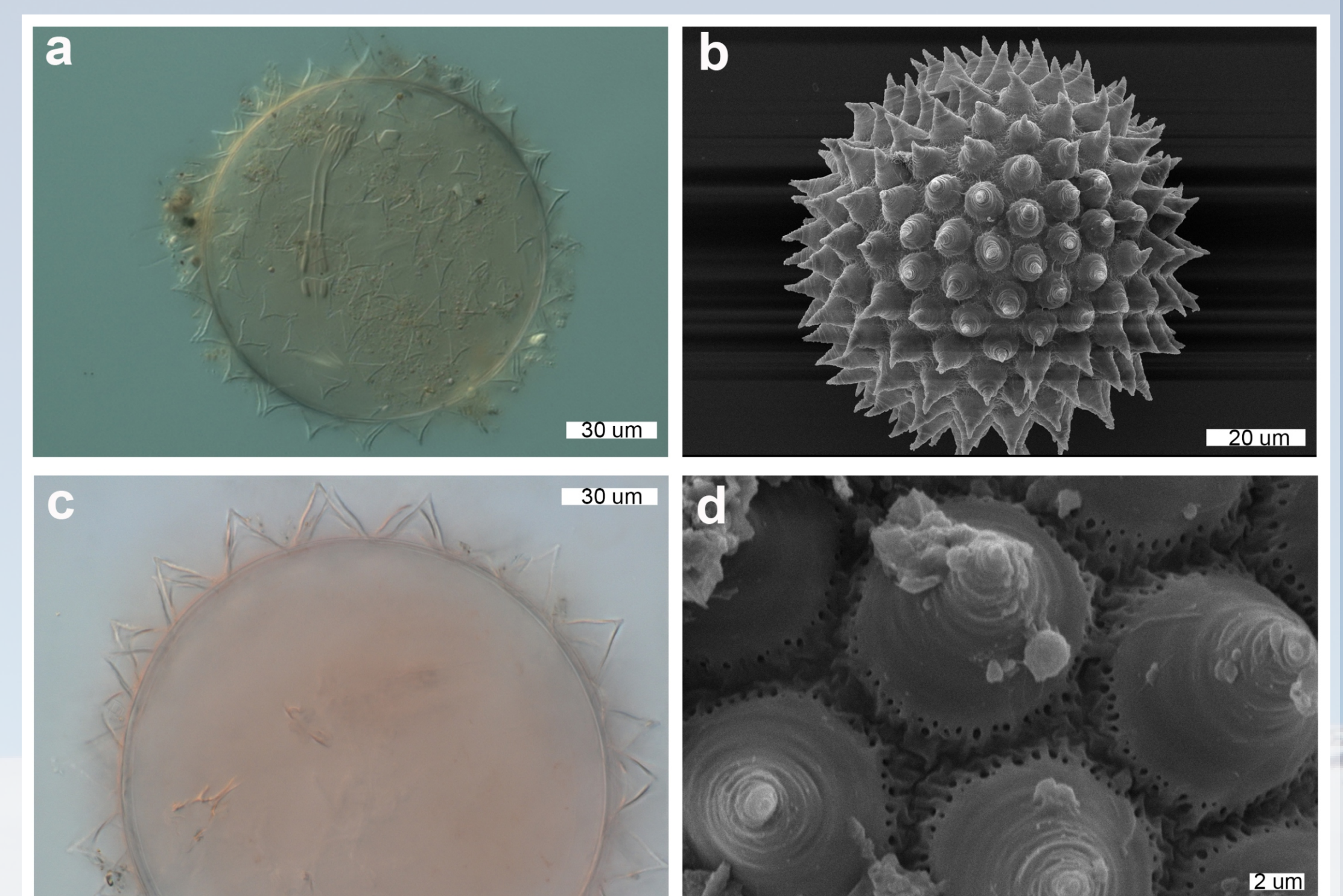
Specimen locality



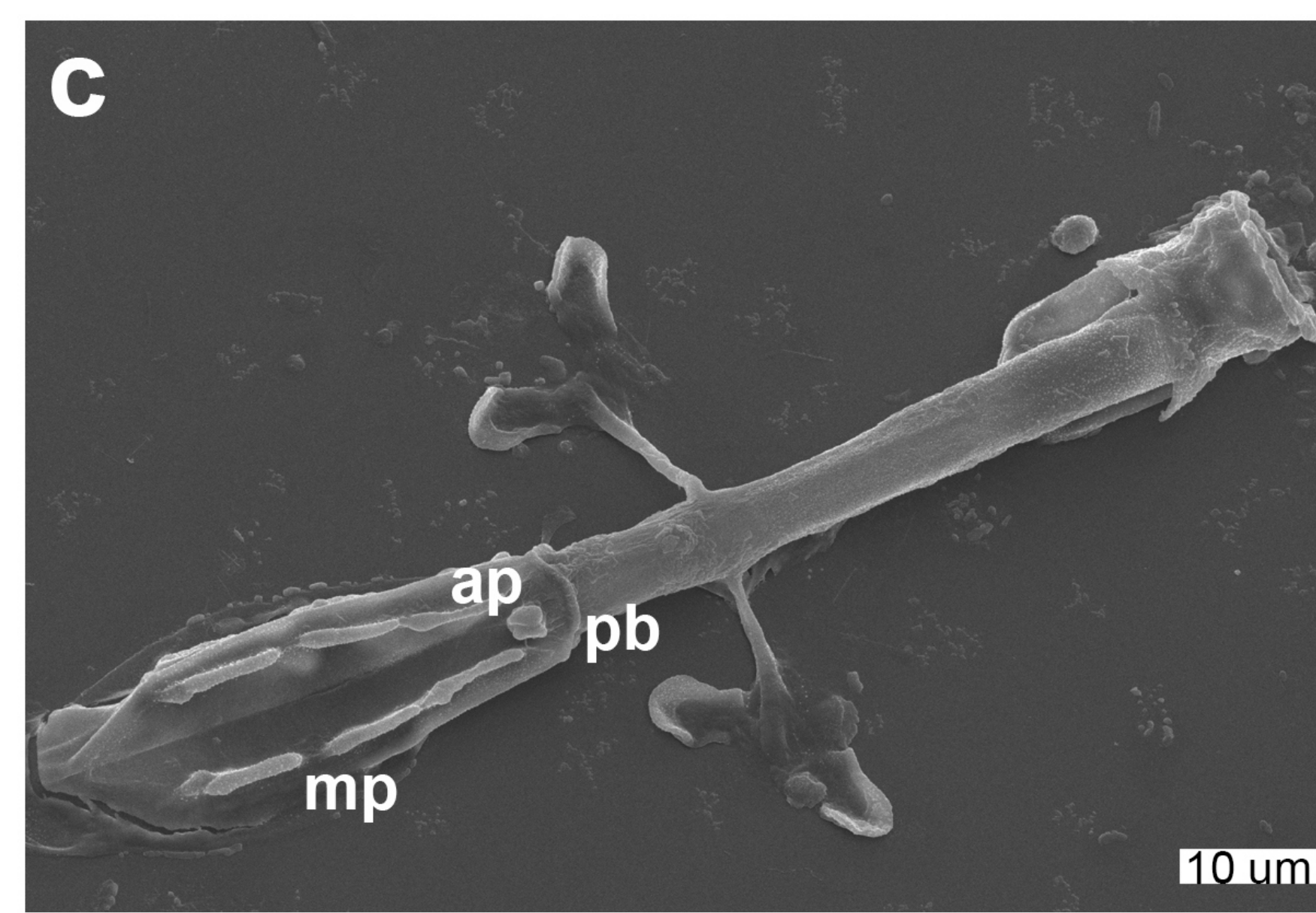
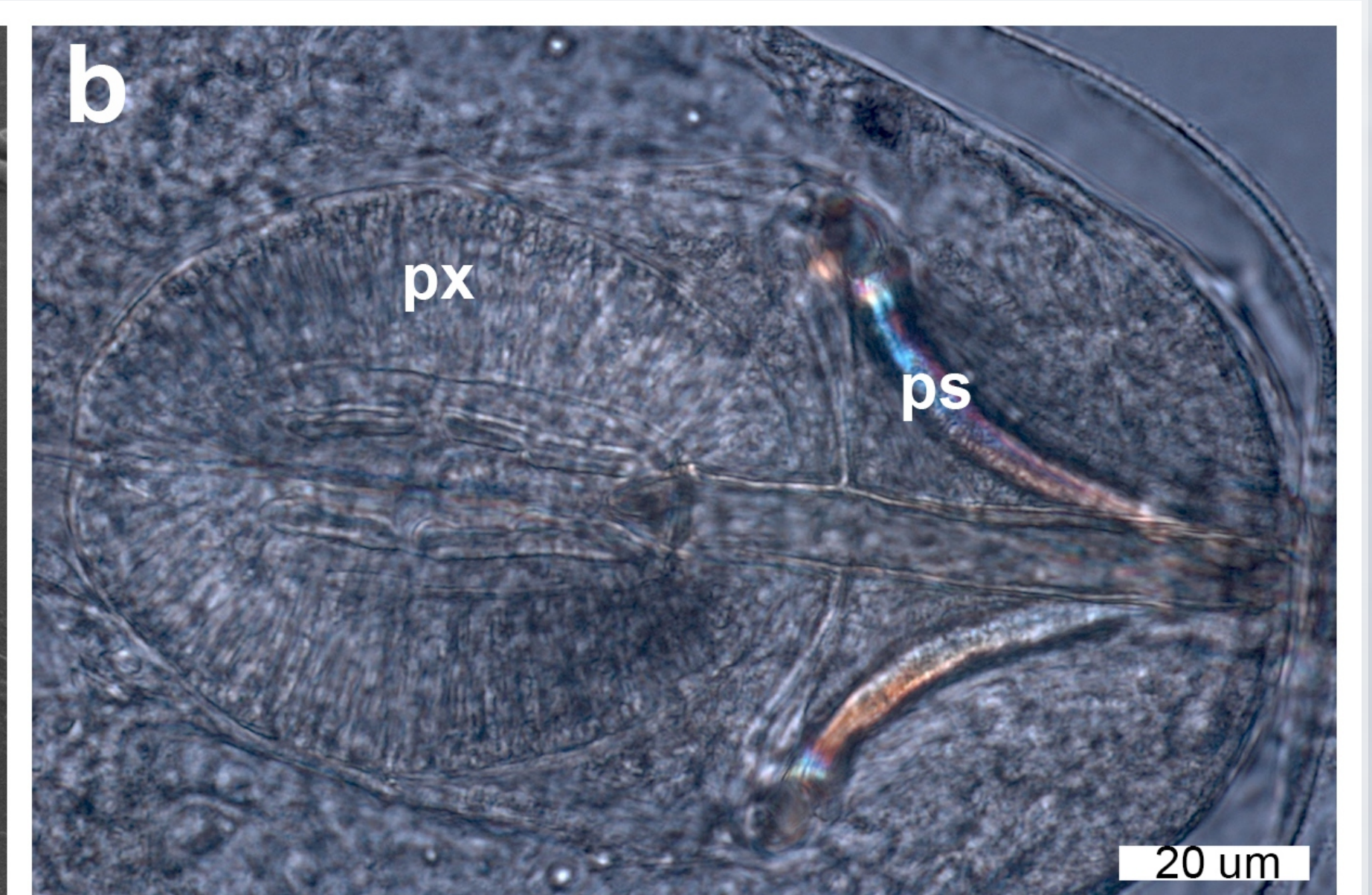
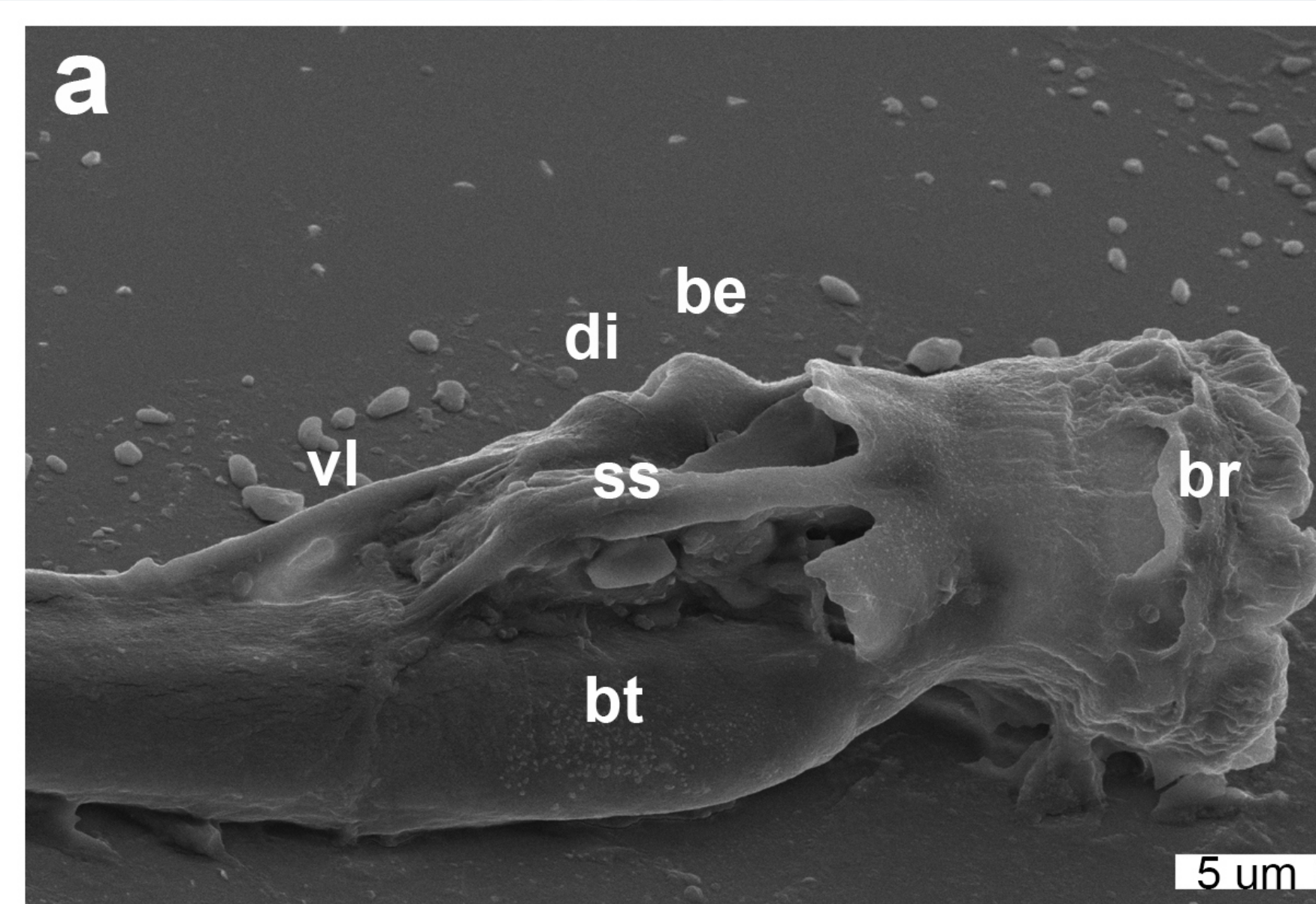
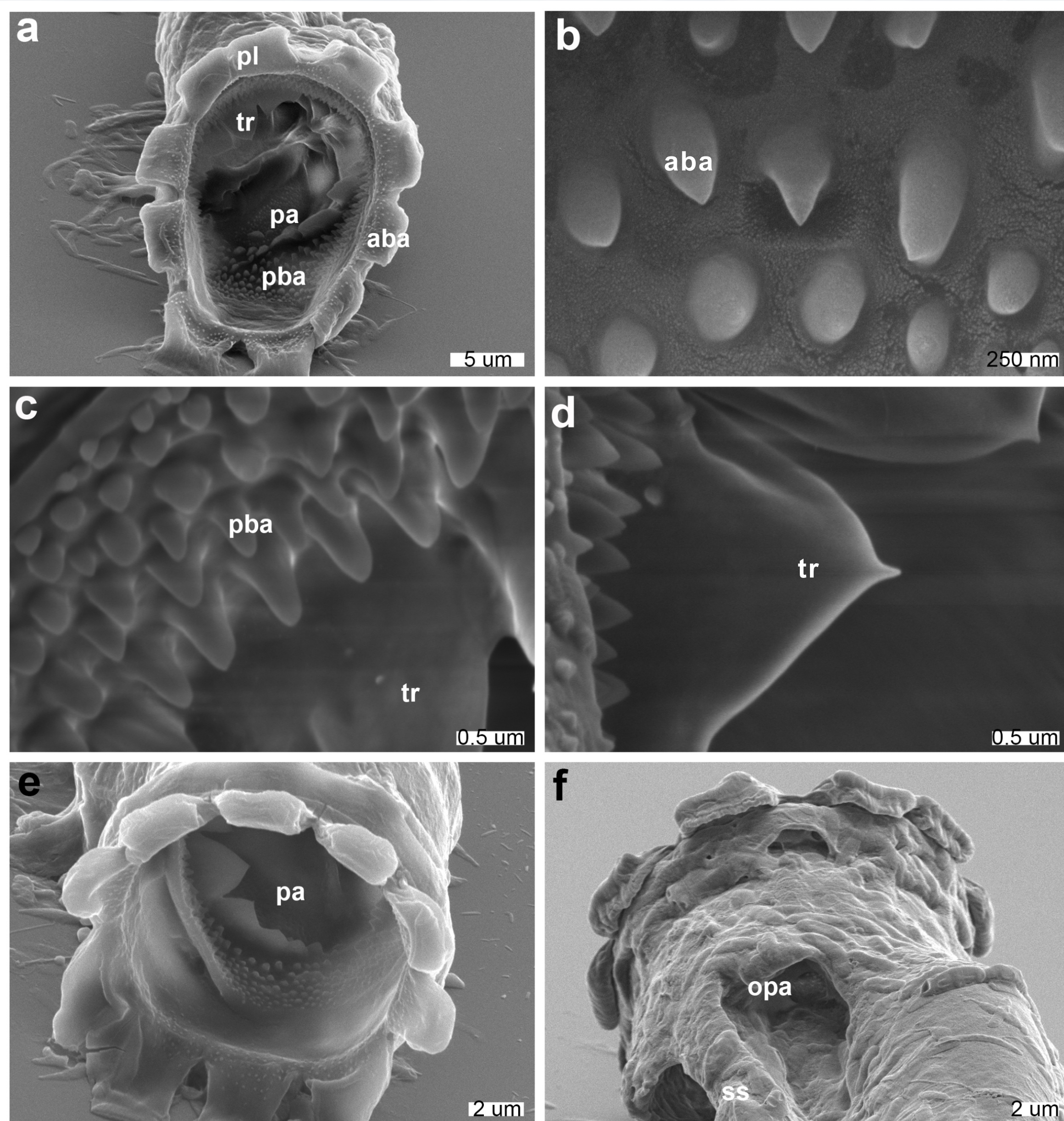
Dactylobiotus sp.



Eggs of *Dactylobiotus* sp.



Buccopharyngeal apparatus of *Dactylobiotus* sp.



Abbreviation

aba	anterior band of buccal armature	opa	oval perforated area
ap	accessory point	pa	perforated area
be	bulbous expansion	pb	pharyngeal bar
br	buccal ring	pba	posterior band of buccal armature
bt	buccal tube	pl	peribuccal lamella
cc	cuticular connection	ps	piercing stylet
di	deep invagination	px	pharynx
mp	macroplacoid	ss	stylet sheath
		tr	transverse ridge
		vl	ventral lamella

Claws of *Dactylobiotus* sp.

