

Willem Vervoort (1917-2010), copepodologist, Hydrozoa specialist and museum director, an obituary

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Bruggen, A.C. van. Willem Vervoort (1917-2010), copepodologist, Hydrozoa specialist and museum director, an obituary.

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An overview of the life of Willem Vervoort (1917-2010), noted specialist in Copepoda and Hydrozoa, director of the National Museum of Natural History/Leiden 1972-1982 and extraordinary professor of systematic zoology/Leiden University 1973-1982, is given. Lists of new taxa in the Hydrozoa for the period 1998-2010, and a list of publications for the same period are included; the period 1917-1998 was covered by Van Bruggen (1998). Vervoort introduced (frequently with co-authors, particularly in the Hydrozoa) 70 taxa of Copepoda (i.e. 1 family, 1 subfamily, 11 genera, 57 species) and 199 of Hydrozoa (i.e. 1 family, 11 genera, 181 species, 3 subspecies, 1 variety and 2 *nomina nova*). The publications are analyzed and it appears that a stupendous amount of work has been generated, as regards the Hydrozoa particularly in the years after his official retirement (1982-2010). A total of 170 papers covers more than 9500 pp. (fig. 2).



Fig. 1. Willem Vervoort just after his 90th birthday, examining slides of Hydrozoa in his office in the new building of the National Museum of Natural History. Photograph E. Kruidenier (NCB/Naturalis), 2007.

The distinguished zoologist Prof. Dr Willem Vervoort died on 18th August 2010, in Leiden. During his lifetime two volumes with scientific essays in his honour were published, i.e., a modest one when he retired (Van Bruggen & Wiebes, eds., 1982, 143 pp.) and a substantial one for his 80th birthday in 1997 (Den Hartog, Van Bruggen, Cornelius & Van Ofwegen, eds., 1998, 460 pp.). In the latter his life and works were described in extenso by Van Bruggen (1998), Cornelius (1998) and Von Vaupel Klein (1998), so that only a recapitulation is in order here.

Born on 12th June 1917 in Schiedam, and inspired by a highly motivated high school teacher, Willem [Wim] Vervoort obtained his Ph.D. at Leiden University in 1946 on a published thesis on the Copepoda of the Snellius Expedition (eastern Netherlands East Indies, now Indonesia). Delays were due to the Second World War which did intensely involve The Netherlands (1940-1945). He had a distinguished career (1941-1982) at the Rijksmuseum van Natuurlijke Historie (Leiden), later called the Nationaal Natuurhistorisch Museum, now forming part of the Netherlands Centre for Biodiversity Naturalis. He rose from scientific assistant in 1941 to director (1972-1982) and also occupied the Chair of Systematic Zoology at Leiden University (1973-1982). His career at the museum was interrupted by a stint in the Zoology Department of this university (1950-1959), where he was in charge of the cytology and histology section. He travelled throughout

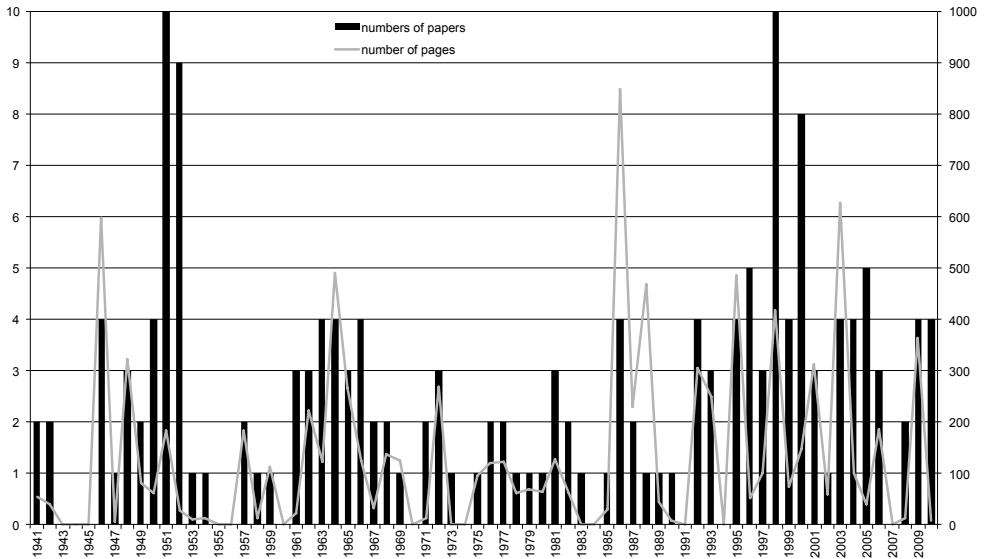


Fig. 2. Graph depicting the publications of Willem Vervoort, covering the period 1941-2010. Both number of papers (left vertical axis) and number of pages per annum (right vertical axis) are shown. The war years (1941-1945) and the years that Vervoort was director of the museum (1972-1982) are also indicated. The amount of work published after his official retirement (1982, when he turned 65) is noticeable. Best year scores are 1946 (599 pp.), 1986 (849 pp.: top score), 1988 (469 pp.), 1995 (486 pp.), 1998 (417 pp.), 2003 (628 pp.); note that of these, the last five annual scores refer to the period after his retirement and the last two after he turned 80. The whole picture is somewhat irregular, probably due to the fact that large papers are usually not readily accepted for publication – in many cases there was a considerable time lapse between completion and publication. Graph generated by Ms Sancia E.T. van der Meij (NCB Naturalis).

the world for field work and museum visits. Mention should be made of his participation in Dutch Antarctic whaling exploits where he served as a cetacean biologist (1946-1948), and in the last great colonial exploration in Netherlands New Guinea (now Irian Jaya, Indonesia), the Star Mountains expedition in 1959, where he acted as senior zoologist. Notwithstanding his multifarious duties in the museum, he vigorously pursued his research on the taxonomy of two marine invertebrate groups, the Copepoda and Hydrozoa. When he retired in 1982 at 65 years of age, he doggedly resumed full-time research on his beloved Hydrozoa, only to return to the Copepoda shortly before his demise – he spent the last few weeks of his life studying copepod parasites of fishes in the museum collections. Much to his regret he was unable to complete some more papers on the Hydrozoa; all manuscripts, notes, drawings, etc. are now available in the archives of the Leiden Museum. Most of his digital copepod files are with Mr Chad Walter at the Smithsonian Institution (National Museum of Natural History), Washington, D.C.

The difficult war years (1940-1945), particularly as regards the museum, are aptly described by Vervoort himself (2010d). One of the highlights of Vervoort's career was the visit of the Japanese Emperor Hirohito (1971) who as a marine biologist wanted to meet his esteemed colleagues Vervoort and Prof. Dr L.B. Holthuis (the world-renowned carcinologist). Incidentally, the tour of Emperor Hirohito in The Netherlands was highly controversial because of his position in World War II. This meeting is also recorded in Vervoort's reminiscences of Holthuis (Vervoort, 2010d).

His period at Leiden university (1950-1958) is characterized by himself as a "largely unsuccessful attempt to become an histologist" (Vervoort, 2010d: 81). However, the present author, then a student, has fond memories of Vervoort's teaching histology and cytology (both the lectures and a fascinating practical course) in the early fifties of last century. Vervoort was always interested in new developments and he taught us to use the latest materials available; in fact some of these did not live up to expectations and this is probably the reason why he was less than satisfied with this part of his career. Much later in his life he became an enthusiastic proponent of the use of computers and always acquired the latest gadgets and techniques. For many younger people he, in his early nineties, was a godsend for solving computer problems. Vervoort also was a promoter of digital photography, which enabled him to pursue his abiding interest in photography in general.

His directorate of the museum was successful and reflects a period of consolidation and limited expansion after the directorate of his two distinguished predecessors, although he continuously had to be vigilant and persistent in the face of cuts in government budgets. In those days the museum functioned mainly as the national institute of taxonomic zoology, with little impact on the general public because of the lack of exhibition facilities. In his period the museum had a full staff complement consisting of a vertebrate section (with four curators), an invertebrate non-insect section (with five curators), and an entomology section (with six curators). In addition there was a palaeontologist for the Dubois collection of vertebrate fossils, and a European Invertebrate Survey curator for faunistics. These 17 university-trained scientists worked together with a bevy of technical assistants who were in charge of preparing specimens and who generally looked after the relevant part of the collection.

Vervoort was a well-travelled man. Over a succession of years he made an annual pilgrimage to the library of The Natural History Museum in London, mainly to work

on his Copepoda bibliography (Vervoort, 1986c, 1986d, 1988, encompassing a total of 1316 pp.; see bibliography in Van Bruggen, 1998: 8-13). Other trips brought him (usually together with his spouse Len) to New Zealand (four times, for working on his local Hydrozoa project) and to other places e.g., to attend symposia and workshops. They travelled frequently to California to visit their daughter (Dr Helene Vervoort-Regan) and her family, but also to work in the Santa Barbara Museum.

The number and quality of Vervoort's publications is stupendous. The tally of publications by Vervoort (and co-authors) may seem rather modest (170), yet the total number of pages is 9609 (fig. 2). His papers published after the 1998 list (Van Bruggen, 1998: 8-13) are enumerated as Appendix No. 1; new taxa introduced in the same period (cf. Van Bruggen, 1998: 14-15) are shown as Appendix No. 2. A third appendix attempts to collate eponyms. As a widely recognized specialist in Copepoda and Hydrozoa, but also as a museum director, Willem Vervoort has frequently been commemorated by names of new taxa world-wide. It appears that he introduced (frequently with co-authors, particularly in the Hydrozoa) 70 taxa of Copepoda (i.e. 1 family, 1 subfamily, 11 genera, 57 species) and 199 of Hydrozoa (i.e. 1 family, 11 genera, 181 species, 3 subspecies, 1 variety and 2 *nomina nova*). As regards the latter, Dr P. Schuchert of the Geneva Museum wrote to the present author in 2010: "The current tally (end 2009) of valid hydrozoan species with Vervoort as sole or as co-author is about 191 species. So yes, you are right, Wim is among the top 5 authors, actually number 2 (Fraser 195; Allman 135). He might well become number one as many of Fraser's species will likely become declared unrecognizable or synonyms."

His Hydrozoa work started in 1941 and already in 1946 Vervoort published a major, well illustrated, treatise in Dutch on the Hydrozoa of The Netherlands (336 pp.). It was fitting that he ended his career with an entirely new version of this work in 2009, this time in another format with a co-author (Marco Faasse) and encompassing only 148 pp. As regards the former, Cornelius (1998: 17) has stated: "Such treatises are typically written following a lifetime's experience in a group, but Wim did this at the very start." Incidentally, after his Copepoda bibliography his single most bulky publication is that on the Hydrozoa of New Zealand, co-authored by Jeanette Watson (2003a) – a large, bound tome (A4 size) with a total of 538 pp. and weighing c. 2.5 kg! Vervoort mainly worked on the basis of faunistics, dependent as he was on material supplied by expeditions and surveys. Close cooperation with his technical assistant in the Leiden Museum, Chiel Slierings, resulted in the best collection of Hydrozoa world-wide.

Apart from the Copepoda and Hydrozoa Vervoort had a wide ranging interest in all marine organisms. Yet, he was also highly interested in plants; as a sequel to his floristic activities he even published on land snails in the 1940s.

Every morning until shortly before his demise Willem Vervoort arrived at the museum, a tall upright figure, immaculately dressed in a clean white laboratory coat, and set to work. Until the end he was in full possession of all his faculties. He made all his hydrozoan slides himself and his room always sported an old-fashioned incubator for drying his preparations. Also, he did his own illustrations in pencil, which in a later stage were usually inked by professional museum artists. He retained his own clear and simple but functional style, so that all his drawings over a span of about 65 years are to a greater or lesser extent comparable. Most of his students and younger col-

leagues successfully copied his style, as is shown in their numerous publications. Physically he was in splendid shape almost to the end, abandoning his bicycle as a means of local transport only when he reached his nineties. Over more than a decade the present author had morning coffee with him in his office when we discussed major issues, particularly politics, but, as is normal among biologists, preferably professional problems. He was always prepared to scan manuscripts, even those outside his expertise (e.g. on terrestrial molluscs of Africa). He was good at this and many a time he prevented prospective authors from making mistakes. Vervoort had a fabulous memory, particularly as regards the history of the museum and, of course, his own specialisms. Also, he was always prepared to assist and he was remarkably efficient in dealing with difficult questions. In the context of field work we fondly remember his propensity for shifting heavy loads.

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Appendix 1

List of publications by Willem Vervoort for the period 1998-2010

This list is a sequel to the list in Van Bruggen (1998: 8-13) and therefore completes the bibliography of Willem Vervoort (book reviews and the titles quoted for 1998 in Van Bruggen, 1998, excepted).

- Peña Cantero, A.L., A.M. García Carrascosa & W. Vervoort, 1998d. On the species of *Filellum* Hincks, 1868 (Cnidaria: Hydrozoa) with the description of a new species.– Journal of Natural History, 32(2): 297-315, figs 1-4 (ii.1998).
- Calder, D.R. & W. Vervoort, 1998e. Some hydroids (Cnidaria: Hydrozoa) from the Mid-Atlantic Ridge, in the North Atlantic Ocean.– Zoologische Verhandelingen, Leiden, 319: 1-65, figs 1-25 (29.iv.1998).
- Medel (Soteras), M.D. & W. Vervoort, 1998f. Atlantic Thyroscyphidae and Sertulariidae (Hydrozoa, Cnidaria) collected during the CANCAP and Mauritania-II expeditions of the National Museum of Natural History, Leiden, The Netherlands.– Zoologische Verhandelingen, Leiden, 320: 1-85, figs 1-24 (12.v.1998).
- Ramil, F., W. Vervoort & J.A. Ansín, 1998g. Report on the Haleciidae and Plumularioidea (Cnidaria, Hydrozoa) collected by the French SEAMOUNT 1 Expedition.– Zoologische Verhandelingen, Leiden, 322: 1-42, figs 1-22, tabs 1-5 (15.vi.1998).
- Peña Cantero, A.L. & W. Vervoort, 1998h. On two new species of *Oswaldella* Stechow, 1919 (Cnidaria, Hydrozoa) from Bransfield Strait (Antarctica).– Polar Biology, 20: 33-40, figs 1-3, tabs 1-3.
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- Peña Cantero, A., Svoboda & W. Vervoort, 1999d. Species of *Antarctoscyphus* Peña Cantero, García Carrascosa & Vervoort, 1997 (Cnidaria, Hydrozoa, Sertulariidae) from recent Antarctic expeditions with R.V. Polarstern, with the description of two new species.– Journal of Natural History, 33(12): 1739-1765, figs 1-8, tabs 1-7 (xii.1999).
- Marques, A.C., H. Mergner, R. Höinghaus & W. Vervoort, 2000a. *Bimeria vestita* (Hydrozoa: Anthomedusae: Bougainvilliidae) senior synonym of *Eudendrium vestitum* (Hydrozoa: Anthomedusae: Eudendriidae).– Zoologische Mededelingen, Leiden 73(22): 321-325, figs 1-3 (06.iii.2000).
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Appendix 2

New taxa (of Hydrozoa) introduced by Vervoort (usually with co-authors) in the period 1998-2010

This list is an addition to the list shown in Van Bruggen (1998: 14-15) and only contains hydrozoan taxa. It appears that in the period 1998-2010 no new names were proposed for copepod taxa.

- Aglaophenia difficilis* Vervoort & Watson, 2003
Aglaophenia digitulus Vervoort & Watson, 2003
Aglaophenia hystrix Vervoort & Watson, 2003
Aglaophenia subspiralis Vervoort & Watson, 2003
Aglaophenia svobodai Ansín Agís, Ramil & Vervoort, 2001
Antarctoscyphus admirabilis Peña Cantero, Svoboda & Vervoort, 1999
Antarctoscyphus fragilis Peña Cantero, Svoboda & Vervoort, 1999
Antennella confusa Ansín Agís, Ramil & Vervoort, 2001
Billardia hyalina Vervoort & Watson, 2003
Carpocladus Vervoort & Watson, 2003
Carpocladus fertilis Vervoort & Watson, 2003
Cladoplumaria Ansín Agís, Ramil & Vervoort, 2005
Cladoplumaria anomala Ansín Agís, Ramil & Vervoort, 2005
Clathrozoella abyssalis Peña Cantero, Vervoort & Watson, 2003
Clathrozoella bathyalis Peña Cantero, Vervoort & Watson, 2003
Clathrozoella medeae Peña Cantero, Vervoort & Watson, 2003
Clathrozoellidae Peña Cantero, Vervoort & Watson, 2003
Corhiza splendens Vervoort & Watson, 2003
Crateritheca bidens Vervoort & Watson, 2003
Dictyocladium amplexum Vervoort & Watson, 2003
Dictyocladium thuja Vervoort & Watson, 2003
Diplopteroides Peña Cantero & Vervoort, 1999
Eudendrium moulouyensis Marques, Peña Cantero & Vervoort, 2000
Filellum disaggregatum Peña Cantero, García Carrascosa & Vervoort, 1998
Filellum magnificum Peña Cantero & Vervoort, 2004
Gigantotheca Vervoort & Watson, 2003
Gigantotheca maxima Vervoort & Watson, 2003
Gigantotheca raukumarai Vervoort & Watson, 2003
Gonaxia australis Vervoort & Watson, 2003
Gonaxia grandis Vervoort & Watson, 2003
Gonaxia immersa Vervoort & Watson, 2003
Gonaxia intercalata Vervoort & Watson, 2003
Gonaxia tasmanica Watson & Vervoort, 2001
Gymnangium explorationis Vervoort & Watson, 2003
Gymnangium japonicum Watson & Vervoort, 2001
Halecium plicatocarpum Vervoort & Watson, 2003
Halecium profundum Calder & Vervoort, 1998
Halecium ralphae Watson & Vervoort, 2001
Halopteris prominens Vervoort & Watson, 2003
Hydractinia cytaeiformis Vervoort, 2006
Hydractinia paucispinata Vervoort, 2006
Lytocarpia alata Vervoort & Watson, 2003
Lytocarpia epizoica Vervoort & Watson, 2003
Lytocarpia lepida Watson & Vervoort, 2001
Lytocarpia (?) rigida Vervoort & Watson, 2003
Lytocarpia (?) similis Vervoort & Watson, 2003
Lytocarpia striata Vervoort & Watson, 2003
Lytocarpia vulgaris Vervoort & Watson, 2003
Mixoscyphus Peña Cantero & Vervoort, 2005
Mixoscyphus antarcticus Peña Cantero & Vervoort, 2005
Nemertesia anomala Calder, Vervoort & Hochberg, 2009 [nom. nov.]
Nemertesia anonyma Ansín Agís, Ramil & Vervoort, 2001
Nemertesia hancocki Calder, Vervoort & Hochberg, 2009 [nom. nov.]
Nemertesia pinnatifida Vervoort & Watson, 2003
Nemertesia tropica Ramil & Vervoort, 2006
Orthopyxis affabilis Vervoort & Watson, 2003
Oswaldella crassa Peña Cantero & Vervoort, 1998
Oswaldella curiosa Peña Cantero & Vervoort, 1998
Oswaldella frigida Peña Cantero & Vervoort, 2004
Oswaldella medeae Peña Cantero & Vervoort, 2004
Oswaldella monomammillata Peña Cantero & Vervoort, 2004
Plumularia anonyma Vervoort & Watson, 2003
Plumularia congregata Vervoort & Watson, 2003
Salacia macer Vervoort & Watson, 2003
Schizotricha crassa Peña Cantero & Vervoort, 2004
Schizotricha southgeorgiae Peña Cantero & Vervoort, 2004
Sertularella stolonifera Vervoort & Watson, 2003

- Staurotheca cornuta* Peña Cantero, García Carrascosa & Vervoort, 1999
- Staurotheca multifurcata* Peña Cantero, García Carrascosa & Vervoort, 1999
- Staurotheca abyssalis* Peña Cantero & Vervoort, 2003
- Staurotheca densa* Peña Cantero & Vervoort, 2003
- Staurotheca profunda* Peña Cantero & Vervoort, 2003
- ?*Staurotheca megalotheca* Vervoort & Watson, 2003
- Streptocaulus caboverdensis* Ansín Agís, Ramil & Vervoort, 2001
- Streptocaulus chonae* Ansín Agís, Ramil & Vervoort, 2001
- Symmetrosicyphus australis* Vervoort & Watson, 2003
- Symplectosicyphus anae* Peña Cantero, Svoboda & Vervoort, 2002
- Symplectosicyphus frigidus* Peña Cantero, Svoboda & Vervoort, 2002
- Symplectosicyphus magnificus* Peña Cantero & Vervoort, 2009
- Symplectosicyphus sofiae* Peña Cantero, Svoboda & Vervoort, 2002
- Symplectosicyphus weddelli* Peña Cantero, Svoboda & Vervoort, 2002
- Symplectosicyphus amoenus* Vervoort & Watson, 2003
- Symplectosicyphus candelabrum* Vervoort & Watson, 2003
- Symplectosicyphus howensis* Vervoort & Watson, 2003
- Symplectosicyphus macrosicyphus* Vervoort & Watson, 2003
- Symplectosicyphus odontiferus* Vervoort & Watson, 2003
- Symplectosicyphus spiraliformis* Vervoort & Watson, 2003
- Synthecium brucei* Vervoort & Watson, 2003
- Synthecium gordonii* Vervoort & Watson, 2003
- Tasmanaria* Watson & Vervoort, 2001
- Tasmanaria aegis* Watson & Vervoort, 2001
- Tasmanaria monticola* Watson & Vervoort, 2001
- Tasmanaria pacifica* Vervoort & Watson, 2003
- Wanglaophenia* Vervoort & Watson, 2003
- Wanglaophenia longicarpa* Vervoort & Watson, 2003
- Wanglaophenia rostrifrons* Vervoort & Watson, 2003
- Zygophylax binematophoratus* Vervoort & Watson, 2003
- Zygophylax echinata* Calder & Vervoort, 1998
- Zygophylax parabiarmata* Vervoort, 2006
- Zygophylax parapacificus* Vervoort & Watson, 2003
- Zygophylax polycarpa* Vervoort & Watson, 2003
- Zygophylax pseudoafricanus* Vervoort & Watson, 2003

Appendix 3

List of eponyms

The following eponyms have been traced in the literature and on the internet (the list is probably not complete because of variation of naming, refer to e.g. the species *Gattya wimleni* and the genus *Wimveria*).

Cnidaria Hydrozoa (1 genus and 15 species)

Bougainvillia vervoorti Bouillon, 1995
Distichopora vervoorti Cairns & Hoeksema, 1998
Eudendrium vervoorti Marques & Migotto, 1998
Euphysa vervoorti Brinckmann-Vos & Arai, 1998
Gattya wimleni Gravier-Bonnet, 1998
Lytocarpia vervoorti El Beshbeeshy, 1991
Monothecha vervoorti Leloup, 1971
Nemertesia vervoorti El Beshbeeshy, 1991
Oswaldella vervoorti Peña Cantero & García Carrascosa, 1998
Schizotricha vervoorti Peña Cantero, 1998
Sertularia vervoorti Migotto & Calder, 1998
Symplectoscyphus vervoorti El Beshbeeshy, 1991
Thuiaria vervoorti El Beshbeeshy, 1991
Tridentata vervoorti Migotto & Calder, 1998
Wimveria Stepanjants, Svoboda, Peña Cantero & Sheiko, 1998

Cnidaria Anthozoa (2 species)

Dendronephthya vervoorti Verseveldt & van Ofwegen, 1991
Simularia vervoorti Verseveldt, 1977

Porifera (1 species)

Desmapsamma vervoorti van Soest, 1998

Crustacea Copepoda (16 species)

Collocheres vervoorti Humes, 1998

Cotylemyzon vervoorti Stock, 1982
Dactylopodella vervoorti Moore, 1976
Ectinosoma vervoorti Soyer, 1972
Enhydrosoma vervoorti Fiers, 1987
Epicalymma vervoorti Heron, English & Damkaer, 1984
Esola vervoorti Huys & Lee, 2000
Euchaeta vervoorti Park, 1978
Holobomolochus vervoorti Cressey, 1983
Macrochiron vervoorti Humes & de Maria, 1969
Notobomolochus vervoorti Avdeev, 1986
Patagoniaella vervoorti Pallares, 1968
Pontella vervoorti Mulyadi, 2003
Pseudochirella vervoorti Tanaka & Omori, 1969
Scaphocalanus vervoorti Park, 1982
Scolecithricella vervoorti Park, 1980

Insecta Odonata (1 species)

Watuwila vervoorti van Tol, 1998

Insecta Hymenoptera (1 genus)

Vervoortihelcon Van Achterberg, 1998

Insecta Lepidoptera (1 species)

Comapotenes vervoorti Diakonoff, 1972

Arachnidea (2 species)

Achaearanea vervoorti Chrysanthus, 1975
Parasteatoda vervoorti Chrysanthus, 1975

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Recently the following posthumous paper was published – this paper does not figure in the counting of papers and pages as shown in fig. 2.

Vervoort, W., L.A. Henry & M.S. Nizinski, 2011. Redescription of the leptothecate hydroid *Halecium macrocephalum* Allman, 1877 (Cnidaria: Hydrozoa).– Journal of Natural History 45 (33-34): 2095-2104, fig. 1 (ix.2011).

