In memoriam Willem F. Prud’homme van Reine
(3 April 1941 – 21 March 2020)

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Willem Frederik Prud’homme van Reine passed away on 21 March 2020, following a prolonged illness, which did not prevent him from continuing his research until a few weeks before his death. With him we lose a great phycologist and marine biologist, who was a dedicated teacher and supervisor, as well as a good friend and colleague.

Willem was born on 3 April 1941 in Zaandam, North Holland. His father was a high school teacher of biology and known for his field guides on coastal and aquatic life. Willem enrolled in the University of Amsterdam for his biology study in 1958.

In 1961, he obtained his Bachelor’s degree. For his Master’s programme, he completed four research projects:
1. on marine fungi in The Netherlands (under ADJ Meeuse);
2. on foot rot disease in grafted cucumber (under LCP Kerling);
3. on shell disease in oysters (under P Korringa, and in collaboration with his later PhD supervisor and colleague, phycologist Chris van den Hoek); and
4. on the biogeography of marine gastropods (under HJ Engel).

He obtained his Master’s – cum laude in 1965 and spent the following year teaching various botanical courses at the Hugo de Vries Laboratory, University of Amsterdam. In 1966 a vacancy arose for a phycologist at the Rijksherbarium of Leiden University. Chris van den Hoek had held the position previously, but was moving on to a professorship at the University of Groningen. Willem applied and was appointed. His remit included research, teaching and curation of the extensive algal
Willem's PhD thesis on the brown algal family *Sphacelariaceae* (1982) remains a model of modern taxonomic revision, based on both herbarium material and cultivated specimens, the latter providing critical details of vegetative and reproductive, developmental morphology. Successfully cultivating marine algae was an enormous challenge in the early 1970s and Willem became a master. His PhD thesis was reputedly the first systematic study in phycology to apply the, then new, cladistic analysis methods to morphological and developmental data. Later in his career, Willem's interest in the phylogeny of brown algae would be further pursued by one of his PhD students, Stefano Draisma, adding robust DNA sequence data analyses to the toolbox.

Over the years Willem's research broadened into four themes:

1. **Taxonomy, phylogenetic systematics and biogeography of selected algal groups.**

   The brown algal order, *Sphacelariales;* the green algal genus, *Caulerpa* J.V.Lamour. (also studied by his PhD student Lisette de Sénèpont Domis), the taxonomy and distribution of tropical seaweeds, especially calcareous reds, in South Sulawesi (also studied by PhD student Erik Verheij); and phylogeny and biogeography of selected genera of red and brown algae in the mid-Atlantic islands (studied by PhD student, Yde de Jong) were the most important.

2. **Marine algal biogeography and floristics in selected regions.**

   Macaronesia was a favourite for many years in the framework of the CANCAP project. There was also the Indo-Malayan region, including the Philippines and Papua New Guinea. These ongoing projects resulted in the discovery of new species, assorted checklists, and biogeographical analyses, that led to further cooperative projects with regional phycologists. Over the years this resulted in significant contributions to the seaweed floras of Indonesia, Japan, Korea, Australia, New Zealand, South Africa, Guinea-Bissau, Mauritania, Eritrea and the Dutch Caribbean islands. And last but not least, there was Western Europe. For the Dutch province of Zeeland he assembled a special herbarium *Algae Zeelandica.*

3. **Nomenclature of algae.**

   For many years Willem was an active member of the Permanent Committee of Algal Nomenclature and of the Special Committee for the harmonization of codes of the International Association of Plant Taxonomists (IAPT). He also painstakingly located the numerous holotypes of the Pacific seaweed species described by FT Kützing in the Rijksherbarium. His interest in nomenclature went hand in hand with a passion for biohistory, leading for instance to an elegant study of the work and collections of Anna Weber-van Bosse and her contemporaries.

4. **Applied phycology.**

   This was an early interest, which culminated in Willem's editorship and co-authorship of the authoritative volume entitled, *Cryptogams: Algae in the Plant Resources of South-East Asia* (PROSEA) 15. Willem was also interested in invasive marine algae and an acknowledged expert on the worldwide invasion of *Caulerpa* species.

Willem's uncanny skills in field observation and attention to habitat details were unsurpassed. He used these abilities to crucially underpin his understanding of seaweed biodiversity. Knowing 'how to look' and 'where to look' were skills he passed on to his many students and are beautifully reflected in his many publications.

Following international conferences and congresses, he and his wife, Hilda, would often combine their vacation with botanizing along the shore of wherever they ended up. He was hosted on sabbaticals to Japan, Australia and New Zealand; there would have been more, had time permitted. In the Naturalis Bioportal (https://bioportal.naturals.nl) 4719 specimens are listed with Prud'homme van Reine as first collector; under the umbrella of the multilateral expeditions, sabbatical visits to other herbaria and conferences, that number more than doubles.

Willem's teaching duties were substantial, and he carried them out with enthusiasm. He taught regular courses in phycology and cryptogamic botany throughout his career, in addition to being coordinator and principal lecturer in the plant biodiversity curriculum at Leiden University for many years. He was also an enthusiastic leader of marine field courses in Normandy and Brittany. In the 1980s he taught courses on Applied Marine Ecology in Brussels at the International FAME College, followed by field excursions to Wimereux. He also supervised five PhD students and numerous MSc research projects.

Willem easily collaborated with colleagues and junior demonstrators, making friends for life among them all. Very close collaboration existed with colleagues in The Netherlands (especially with the University of Groningen group) and abroad in Belgium, Germany, the UK, Spain, Macaronesia, Eritrea, South Africa, Australia, New Zealand, Japan, South Korea, Indonesia and the Philippines. It is no wonder, that Willem was asked to serve on or lead numerous committees, within the Rijksherbarium (later National Herbarium of The Netherlands), the Science Faculty of Leiden University, and several national and international bodies. In 1985/86 he presided over a committee to draft a new research strategy for biological research in The Netherlands. For many years he served as phycological editor of the journal *Nova Hedwigia.* He organized the Dutch phycological community at home and worked to gain support for research funding through the Dutch National Science Foundation (NWO). Moreover, he had an important role as co-organizer of the 5th Symposium on Fauna and Flora of the Cape Verde Islands (4–7 October 1989) and the 6th International Phylogenetic Congress (9–16 August 1997), both hosted in Leiden.

Public outreach was also a major activity. For many years he lead the Leiden chapter of The Netherlands Society for Field Biology (KNV), numbering many amateur naturalists among its members.

As a marine field biologist more generally, Willem also collaborated with marine zoologists from the Rijksmuseum van Natuurlijke Historie (Leiden) and the Zoological Museum of Amsterdam – taxonomic institutes that later became part of Naturalis Biodiversity Center. This was most obvious during large-scale marine expeditions (with zoologists Jaap van der Land and Bert Hoeksema). Again, he brought his keen observational skills to good use whether collecting benthic algae or invertebrates. Some of these expeditions were ship-based (e.g., CANCAP – Mauritania in the East Atlantic 1977–1988, Snellius-II in Indonesia, 1984), whereas the later ones were based in field stations on land with emphasis on sampling by diving, snorkelling and beach combing. As with all expeditions, field work is very labour-intensive and tiring. To that end, Willem was delighted to collaborate with students and former students whom he had supervised: Lisette de Sénèpont Domis in East Kalimantan (2003), Stefano Draisma in the Bay of Jakarta and the Thousand Islands (2005), and finally with Luna van der Loos in Sint Eustatius, Caribbean Netherlands (2015).
Willem had a kind and noble personality. That kindness, however, did not prevent him from fighting assertively and tirelessly for the interests of systematic biology in general, seaweed research in particular, and for adequate funding from the university and the government – for research, field work and attendance at international conferences. He was very active in the social life of the institute and within the population of Leiden biology students.

Throughout his career, Willem was supported by his soul mate, fellow biologist and much loved wife, Hilda. They met as university students and the perfect match was made. It is to Hilda, and their two daughters, Simone and Barbara, their husbands and the grandchildren Koen, Heleen and Tim that we extend our sympathy.

Acknowledgements We wish to thank Hilda Prud’homme van Reine-de Jager, Nicolien Sol, Peter Audiffred, Erik Smets and Charles Fransen for valuable information and comments.

Eponymy
Osmundea prudhommevanreinei Machín-Sánchez & Gil-Rodriguez

NEW TAXA AND NEW NAME COMBINATIONS BY W.F. PRUD’HOMME VAN REINE


New order
Onslowiales Draisma & Prud’homme 2001

New families
Onslowiaceae Draisma & Prud’homme 2001
Sphacelodermaceae Draisma, Prud’homme & H.Kawai 2010

New genera
Caulerpa Prud’homme & Lokhorst 1992
Protohalopteris Draisma, Prud’homme & H.Kawai 2010
Sphacelorus Draisma, Prud’homme & H.Kawai 2010
Spongophloea Huisman, De Clerck, Prud’homme & Borowitzka 2011

New subgenera
Caulerpa subgenus Cliftoni Draisma, Prud’homme & G.Belton 2014
Sphacelaria subgenus Bracteata Prud’homme 1993
Sphacelaria subgenus Propagullifera Prud’homme 1982
Sphacelaria subgenus Reinkea Prud’homme 1993

New sections
Caulerpa subgenus Cliftoni section Cliftoni Draisma, Prud’homme & G.Belton 2014
Sphacelaria subgenus Propagullifera section Furtigerae Prud’homme 1982
Sphacelaria subgenus Propagullifera section Tribuloides Prud’homme 1982
Sphacelaria subgenus Pseudochaetopteris section Pseudochaetopteris Prud’homme 1982
Sphacelaria subgenus Pseudochaetopteris section Racemosae Prud’homme 1982

New series
Sphacelaria phacelaria subgenus Propagullifera section Tribuloides series Humeratae Prud’homme 1993

New species
Caulerpa buginensis E.Verheij & Prud’homme 1993
Caulerpa coppejansii G.Belton & Prud’homme 2019
Caulerpa lucassii Prud’homme, Draisma & G.Belton 2019
Caulerpa perplexa Huisman, G.Belton, Draisma, Gurgel & Prud’homme 2019
Gelidium amboniense A.M.Hatta & Prud’homme 1991
Padina calcarea Ni-Ni-Win, Draisma, Prud’homme & H.Kawai 2012
Rhipila nigrescens Coppejans & Prud’homme 1990
Sebdenia canariensis Soler-Onis, Haroun, Viera-Rodriguez & Prud'homme 2019
Sphacelaria tsingii Draisma, Y.-S.Keum, Prud'homme & Lokhorst 1998

New infraspecific taxa
Gelidium latifolium f. elongatum A.M.Hatta & Prud'homme 1991
Udotea flavibellum f. longifolia E.Verheij & Prud'homme 1993
Ulva compressa var. abbreviata W.S.Attmadja & Prud'homme 2014

New combinations
Battersia arctica (Harvey) Draisma, Prud'homme & H.Kawai 2010
Battersia plumigeria (Holmes ex Hauck) Draisma, Prud'homme & H.Kawai 2010
Battersia racemosa (Greville) Draisma, Prud'homme & H.Kawai 2010
Caulerpa subgenus Araucarioideae (J.Agardh ex De Toni) Draisma, Prud'homme, Sauvage & G.Belton 2014
Caulerpa subgenus Caulerpella (Prud'homme & Lokhorst) Draisma, Prud'homme & Sauvage 2014
Caulerpa subgenus Caulerpella section Caulerpella (Prud'homme & Lokhorst) Draisma, Prud'homme & Sauvage 2014
Caulerpa andamanensis (W.R.Taylor) Draisma, Prud'homme & Sauvage 2014
Caulerpa macra (Weber Bosse) Draisma & Prud'homme 2014
Caulerpella ambiguca (Okamura) Prud'homme & Lokhorst 1992
Cladophora spongiosa f. hedwigioidea (Bory) Prud'homme 1972
Cladophora spongiosa f. verticillatus (Lightfoot) Prud'homme 1972
Colaconema dasyae (Collins) Stegenga, I.Mol, Prud'homme & Lokhorst 1997
Colaconema gracile (Bergesen) Ateweberhan & Prud'homme 2005
Colaconema naumanni (Askensay) Prud'homme, Haroun & L.B.T.Kostermans 1999

Desmarestia dudosnaïyi subsp. foliacea (V.A.Pease) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia dudosnaïyi subsp. patagonica (Asensi) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia dudosnaïyi subsp. sivertsenii (Baardseth) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia herbacea subsp. tabacoides (Okamura) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia herbacea subsp. punctata (Okamura) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia herbacea subsp. megacarpa (Montagne) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia herbacea subsp. f. distans (C.Agardh) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia herbacea subsp. f. firma (C.Agardh) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia herbacea subsp. foliacea (Okamura) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014
Desmarestia herbacea subsp. peruviana (Montagne) A.F.Peters, E.C.Yang, F.C.Küpper & Prud'homme 2014

Dictyota alternans (J.Agardh) Hörnig, Schnettler & Prud'homme 1993
Dictyota angusta (J.Agardh) Hörnig, Schnettler & Prud'homme 1992
Dictyota ceremicorni f. pseudohomodonta (Cribb) Hörnig, Schnettler & Prud'homme 1992
Dictyota crinita (J.Agardh) Hörnig, Schnettler & Prud'homme 1992
Dictyota decumbens (R.W.Ricker) Hörnig, Schnettler & Prud'homme 1992
Dictyota gunniana (J.Agardh) Hörnig, Schnettler & Prud'homme 1992
Dictyota kohlmeyeri (Nizamuddin & Gerloff) Hörnig, Schnettler & Prud'homme 1992
Dictyota marginata (J.Agardh) Hörnig, Schnettler & Prud'homme 1992
Dictyota montiflora (J.Agardh) Hörnig, Schnettler & Prud'homme 1992
Dictyota okameae (E.Y.Dawson) Hörnig, Schnettler & Prud'homme 1993
Dictyota pinnata (E.Y.Dawson) Hörnig, Schnettler & Prud'homme 1993
Dictyota sartorii (Kützing) Hörnig, Schnettler & Prud'homme 1992
Dictyota tenera (J.Agardh) Hörnig, Schnettler & Prud'homme 1993
Gelidium carinarensis (Grunow) Seoane Camba ex Haroun, Gil-Rodriguez, Díaz de Castro & Prud'homme 2002
Gelidium tropicum (E.Y.Dawson) E.Verheij & Prud'homme 1993
Halopteris cordyosa (Dickie) Draisma, Prud'homme & H.Kawai 2010
Halopteris paniculata (Suhr) Prud'homme 1972
Halopteris scoparia var. scoparioides (Lyngbye) Prud'homme 1978
Herpolithus bornetii (Hariot) Draisma, Prud'homme & H.Kawai 2010
Herpolithus bracteatus (Reinke) Draisma, Prud'homme & H.Kawai 2010
Herpolithus carpopoglossi (Womersley) Draisma, Prud'homme & H.Kawai 2010
Herpolithus chlorozonocarpus (Sauvageau) Draisma, Prud'homme & H.Kawai 2010
Herpolithus implicatus (Sauvageau) Draisma, Prud'homme & H.Kawai 2010
Herpolithus multiplex (Womersley) Draisma, Prud'homme & H.Kawai 2010
Herpolithus pulvinatus (J.D.Hooker & Harvey) Draisma, Prud'homme & H.Kawai 2010
Herpolithus reinkeli (Sauvageau) Draisma, Prud'homme & H.Kawai 2010
Herpolithus spurius (Sauvageau) Draisma, Prud'homme & H.Kawai 2010
Herpolithus stewartensis (Lindauer) Draisma, Prud'homme & H.Kawai 2010
Herpolithus symподioсarpus (Sauvageau) Draisma, Prud'homme & H.Kawai 2010
Hydrolithon gardineri (Foslie) E.Verheij & Prud'homme 1993
Prototaxolithus radiicans (Dilwyn) Draisma, Prud'homme & H.Kawai 2010
Sphacelaria subgenus Battersia (Reinke ex Batters) Prud'homme 1982
Sphacelaria mirabilis (Reinke ex Batters) Prud'homme 1982
Sphacelodera caespitulum (Lyngbye) Draisma, Prud'homme & H.Kawai 2010
Sphacelorchis nanus (Nageli ex Kützing) Draisma, Prud'homme & H.Kawai 2010
Spongophloea procumbens (Weber Bosse) Huisman, De Clerck, Prud'homme & Borowitzka 2011
Spongophloea tissotii (Weber Bosse) Huisman, De Clerck, Prud'homme & Borowitzka 2011
Spongophloea treubi (Weber Bosse) Huisman, De Clerck, Prud'homme & Borowitzka 2011
Spyridia griffithsiana (J.E.Smith) G.C.Zuccarello, Prud'homme & Stegenga 2004

PUBLICATIONS, ABSTRACTS, UNPUBLISHED REPORTS, AND BOOK REVIEWS (SEPARATE)

This list was compiled by browsing through internet sources (Google Scholar, Naturals Biodiversity Center’s online Library Catalogue, Naturals Repository, Naturalis lidschriften.nl, Web of Science, WorldCat), reference lists in publications, old volumes of the journal ‘Het Zeepaard’, and the curriculum vitae (CV) of Willem’s PhD Dissertation (Prud’homme van Reine WF. 1982. A taxonomic revision of the European Sphacelariaceae (Sphacelariales, Phaeophyceae). Leiden Botanical Series 6: 1–193). The annual reports of the Rijksherbarium 1968–1988, the Rijksherbarium/Hortus Botanicus 1989–1998, and the Nationaal Herbarium Nederland 1999–2006 served as important additional sources. These annual reports also contain detailed information of fieldwork and conference attendances.

The bibliography is not 100 % complete, but gives a good idea of Willem’s enormous productivity and broad expertise.

1961
1965
– Thalassiosyecetes. Report of M5 research project, Universiteit van Amsterdam, 83 + xxi pp
1966
– (with Van der Hoek C) Isolation of living algae growing in the shells of molluscs and barnacles with EDTA (ethylenediaminetetraacetic acid). Blumea 14 (2): 331–332.
1968
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1978
- (with Fortuin A, Hoogwegt J) Goed zicht: een uitgebreid ter gelegenheid van het eerste lustrum van de Leidse Studenten Duikvereniging.
- Criteria used in systematic studies in the Sphacelariales. In: Irvine DEG, Price JH (eds), Modern approaches to the taxonomy of red and brown algae. The Systematics Association Special Volume 10: 301–323.

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1980
- De invasie van het Japans bessenwier In Nederland. Vita Marina, Mariene Leven 3: 35–40.

1981

1982
- List of localities. Supplement to ‘A taxonomic revision of the European Sphacelariales (Sphacelariales, Phaeophyceae)’. Rijksherbarium, Leiden, 86 pp.

1983
- In memoriam Simon van Ooststroom. Natura: 117.

1984

1985

1986


Marine algae have their taxonomic challenges too. In: New directions in systematics, ESF Symposium p. 6 (abstract).


1998


Useful algae in PROSEA. Abstracts XVth International Seaweed Symposium: 67.


1999


2000


2001


(with Draisma SGA, Stam WT, Olsen JL) Phylogeny of the Phaeophyceae based on rbcL sequences. 7th International Phycological Congress, Thessaloniki, Greece. Abstract 446.


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2002


2003


2005


(with Boedeker C, Zuccarello GC, Draisma SGA) Phylogeny of the Cladophorales (Chlorophyta) inferred from 28S rDNA sequences, focusing on Chaetomorpha and Rhizochlorum. Phycologia 44 (4 Suppl.): 10.


(with Millar AJK) Marine benthic macroalgae collected by Vieillard from New Caledonia and described as new species by Küütz. Phycologia 44 (5): 536–549.

(with De Senerpont Domis LN, Draisma SGA) Marine lakes, reefs and seaweeds in NE Kalimantan, Indonesia. Phycologia 44 (4 Suppl.): 84.


2009


2010


(with Draisma SGA) Proposal to conserve the name Sphacelaria (Sphacelariales, Phaeophyceae) with a conserved type. Taxon 59 (6): 1891–1892.


2011


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