

## **Publications**

### *Peer reviewed journal articles*

Scholtz, G. (1984) Untersuchungen zur Bildung und Differenzierung des postnaupliaen Keimstreifs von *Neomysis integer* Leach (Crustacea, Malacostraca, Peracarida). Zoologische Jahrbücher Anatomie und Ontogenie der Tiere 112, 295-349.

Dohle, W. & Scholtz, G. (1988) Clonal analysis of the crustacean segment: the discordance between genealogical and segmental borders. Development 104 Suppl.: 147-160.

Scholtz, G. (1990) The formation, differentiation and segmentation of the post-naupliar germ band of the amphipod *Gammarus pulex* L. (Crustacea, Malacostraca, Peracarida). Proceedings of the Royal Society of London B 239: 163-211.

Scholtz, G. (1992) Cell lineage studies in the crayfish *Cherax destructor* (Crustacea, Decapoda): germ band formation, segmentation, and early neurogenesis. Roux's Archives of Developmental Biology 202: 36-48.

Sandeman, D., Scholtz, G. & Sandeman, R. (1993) Brain evolution in decapod Crustacea. Journal of Experimental Zoology 295: 112-133.

Scholtz, G. (1993) Teloblasts in decapod embryos: an embryonic character reveals the monophyletic origin of freshwater crayfishes (Crustacea, Decapoda). Zoologischer Anzeiger 230: 45-54.

Scholtz, G., Dohle, W., Sandeman, R. E. & Richter S. (1993) Expression of *engrailed* can be lost and regained in cells of one clone in crustacean embryos. International Journal of Developmental Biology 37: 299-304.

Scholtz, G., Patel, N. H., & Dohle, W. (1994) Serially homologous *engrailed* stripes are generated via different cell lineages in the germ band of amphipod crustaceans (Malacostraca, Peracarida). International Journal of Developmental Biology 38: 471-478.

Richter, S. & Scholtz, G. (1994) Morphological evidence for a hermit crab ancestry of lithodids (Crustacea, Decapoda, Anomala, Paguroidea). Zoologischer Anzeiger 233: 187-210.

Scholtz, G. (1995) Head segmentation in Crustacea - an immunocytochemical study. Zoology 98: 104-114.

Scholtz, G. & Richter, S. (1995) Phylogenetic systematics of the reptantian Decapoda (Crustacea, Malacostraca). Zoological Journal of the Linnaean Society 113: 289-328.

Dohle, W. & Scholtz, G. (1995) Segmentbildung im Keimstreif der Krebse - zelluläre Wechselwirkungen haben eine größere Bedeutung als die Zellgenetik. Biologie in unserer Zeit 25: 90-100.

Scholtz, G. (1995) Expression of the *engrailed* gene reveals nine putative segment-anlagen in the embryonic pleon of the freshwater crayfish *Cherax destructor* (Crustacea, Malacostraca, Decapoda). Biological Bulletin 188: 157-165.

Scholtz, G. (1995) Ursprung und Evolution der Flußkrebse (Crustacea, Astacida). Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin (N.F.) 34: 93-115.

Scholtz, G. (1995) The attachment of the young in the New Zealand freshwater crayfish *Paranephrops zealandicus* (White, 1848) (Decapoda, Astacida, Parastacidae). New Zealand Natural Science 22: 81-89.

Scholtz G. & Dohle, W. (1996) Cell lineage and cell fate in crustacean embryos - a comparative approach. International Journal of Developmental Biology 40: 211-220.

Dohle, W. & Scholtz, G. (1997) How far does cell lineage influence cell fate specification in crustacean embryos? Seminars in Cell and Developmental Biology 8: 379-390.

Scholtz, G., Mittmann, B. & Gerberding, M. (1998) The pattern of *Distal-less* expression in the mouthparts of crustaceans, myriapods and insects: new evidence for a gnathobasic mandible and the common origin of Mandibulata. International Journal of Developmental Biology 42: 801-810.

Scholtz, G. (1998) Von Zellen und Kontinenten - die Evolution der Flusskrebse (Decapoda, Astacida). Staphia 58 (N.F.) 137: 205-212.

Gerberding, M. & Scholtz, G. (1999) Cell lineage of the midline cells in the amphipod crustacean *Orchestia cavimana* (Crustacea, Malacostraca) during formation and separation of the germ band. Development Genes and Evolution 209: 91-102.

Scholtz, G. (1999) Freshwater Crayfish Evolution. Freshwater Crayfish 12: 37-48.

Scholtz, G. (2000) Evolution of the nauplius stage in malacostracan crustaceans. Journal of Zoological Systematics and Evolutionary Research 38: 175-187.

Richter, S. & Scholtz, G. (2001) Phylogenetic analysis of the Malacostraca (Crustacea). Journal of Zoological Systematics and Evolutionary Research 39: 113-136.

Scholtz, G. (2001) Evolution of developmental patterns in arthropods – the contribution of gene expression to morphology and phylogenetics. Zoology 103: 99-111.

Richter, S., Braband, A., Aladin, N. & Scholtz, G. (2001) The phylogenetic relationships of predatory waterfleas (Cladocera: Onychopoda, Haplopoda) inferred from 12S rDNA. Molecular Phylogenetics and Evolution 19: 105-113.

Gerberding, M. & Scholtz, G. (2001) Neurons and glia in the midline of the higher crustacean *Orchestia cavimana* are generated via an invariable cell lineage that

comprises a median neuroblast and glial progenitors. *Developmental Biology* 235: 397-409.

Mittmann, B. & Scholtz, G. (2001) *Distal-less* expression in embryos of *Limulus polyphemus* (Chelicerata, Xiphosura) and *Lepisma saccharina* (Insecta, Zygentoma) suggests a role in the development of mechanoreceptors, chemoreceptors, and the CNS. *Development Genes and Evolution* 211: 232-243.

Olesen, J., Richter, S. & Scholtz G. (2001) The evolutionary transformation of phyllopodous to stenopodous limbs in the Branchiopoda (Crustacea) – Is there a common mechanism for early limb development in arthropods? *International Journal of Developmental Biology* 45: 869-876.

Scholtz, G. & Kawai, T. (2002) Aspects of embryonic and post-embryonic development of the Japanese crayfish *Cambaroides japonicus* (Crustacea, Decapoda) including a hypothesis on the evolution of maternal care in the Astacida. *Acta Zoologica* 83: 203-212.

Kawai, T. & Scholtz, G. (2002) Behavior of juveniles of the Japanese endemic species *Cambaroides japonicus* (Decapoda: Astacidea: Cambaridae) with observations on the position of the spermatophore attachment on the adult females. *Journal of Crustacean Biology* 22: 532-537.

Brösing, A., Richter, S. & Scholtz, G. (2002) The foregut-ossicle system of *Dromia wilsoni*, *Dromia personata* and *Lauridromia intermedia* (Decapoda, Brachyura, Dromiidae), studied with a new staining method. *Arthropod Structure and Development* 30: 329-338.

Scholtz, G. (2002) The Articulata hypothesis - or what is a segment? *Organisms Diversity and Evolution* 2: 197-215.

Wolff, C. & Scholtz, G. (2002) Cell lineage, axis formation, and the origin of germ layers in the amphipod crustacean *Orchestia cavimana*. *Developmental Biology* 250: 44-58.

Scholtz, G. & Wolff, C. (2002) Cleavage pattern, gastrulation, and germ disc formation of the amphipod crustacean *Orchestia cavimana*. *Contributions to Zoology* 71: 9-28.

Braband, A., Richter, S., Hiesel, R. & Scholtz, G. (2002) Phylogenetic relationships within the Phyllopoda (Crustacea, Branchiopoda) based on mitochondrial and nuclear markers. *Molecular Phylogenetics and Evolution* 25: 229-244.

Mittmann, B. & Scholtz, G. (2003) Development of the nervous system in the "head" of *Limulus polyphemus* (Chelicerata: Xiphosura): morphological evidence for a correspondence between the segments of the chelicerae and of the (first) antennae of Mandibulata. *Development Genes and Evolution* 213: 9-17.

Scholtz, G., Braband, A., Tolley, L., Reimann, A., Mittmann, B., Lukhaup, C., Steuerwald, F. & Vogt, G. (2003) Parthenogenesis in an outsider crayfish. *Nature* 421: 806.

Olesen, J., Richter, S. & Scholtz, G. (2003) On the ontogeny of *Leptodora kindtii* (Crustacea, Branchiopoda, Cladocera), with notes on the phylogeny of the Cladocera. *Journal of Morphology* 256: 235-259.

Sinakevitch, I., Douglas, J.K., Scholtz G., Loesel, R. & Strausfeld, N.J. (2003) Conserved and convergent organization in the optic lobes of insects and isopods, with reference to other crustacean taxa. *Journal of Comparative Neurology* 467: 150-172.

Vogt G., Tolley L. & Scholtz G. (2004) Life stages and reproductive components of the Marmorkrebs (marbled crayfish), the first parthenogenetic decapod crustacean. *Journal of Morphology* 261: 286-311.

Alwes, F. & Scholtz, G. (2004) Cleavage and gastrulation of the euphausiacean *Meganyctiphanes norvegica* (Crustacea, Malacostraca) *Zoomorphology* 123: 125-137.

Hejnol, A. & Scholtz, G. (2004) Clonal analysis of *Distal-less* and *engrailed* expression patterns during early morphogenesis of uniramous and biramous crustacean limbs. *Development Genes and Evolution* 214: 473-485.

Scholtz, G. (2004) Coelenterata versus Acrosomata - zur Position der Rippenquallen (Ctenophora) im phylogenetischen System der Metazoa. In: Kontroversen in der Phylogenetischen Systematik (Eds. Richter, S. und Sudhaus, W.), Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin (N.F.) 43: 15-33.

Kamenz, C., Dunlop, J.A. & Scholtz, G. (2005) Characters in the book lungs of Scorpiones (Chelicerata, Arachnida) revealed by scanning electron microscopy. *Zoomorphology* 124: 101-109.

Scholtz, G. (2005) Homology and ontogeny: Pattern and process in comparative developmental biology. *Theory in Biosciences* 124: 121-143.

Braband, A., Kawai, T. & Scholtz, G. (2006) The phylogenetic position of the East Asian freshwater crayfish *Cambaroides* within the Northern Hemisphere Astacoidea (Crustacea, Decapoda, Astacida) based on molecular data. *Journal of Zoological Systematics and Evolutionary Research* 44: 17-24.

Scholtz, G. & Kamenz, C. (2006) The book lungs of Scorpiones and Tetrapulmonata (Chelicerata, Arachnida): evidence for homology and a single terrestrialisation event of a common arachnid ancestor. *Zoology* 109: 2-13.

Alwes, F. & Scholtz, G. (2006) Stages and other aspects of the embryology of the parthenogenetic Marmorkrebs (Decapoda, Reptantia, Astacida). *Development Genes and Evolution* 216: 169-184.

Wolff, C. & Scholtz, G. (2006) Cell lineage analysis of the mandibular segment of the amphipod *Orchestia cavimana* reveals that the crustacean paragnaths are sternal outgrowths and not limbs. *Frontiers in Zoology* 3: 19.

Semmler, H., Hoeg, J.T., Scholtz, G. & Wanninger, A. (2006) Preliminary results on the anatomy of the larval musculature of *Balanus improvisus* (Darwin, 1854) (Crustacea: Cirripedia: Thecostraca) using phalloidin staining in combination with confocal laserscanning microscopy. Invertebrate Reproduction and Development 49: 207-212

Hejnol, A., Schnabel, R & Scholtz, G. (2006) A 4D-microscopic analysis of the germ band in the isopod crustacean *Porcellio scaber* (Malacostraca, Peracarida) - developmental and phylogenetic implications. Development Genes and Evolution 216: 755-767

Scholtz, G. & Edgecombe, G.D. (2006) The evolution of arthropod heads: reconciling morphological, developmental and palaeontological evidence. Development Genes and Evolution 216: 395-415

Martin, P., Kohlmann, K. & Scholtz, G. (2007) The parthenogenetic Marmorkrebs (marbled crayfish) produces genetically uniform offspring. Naturwissenschaften 94, 843-846.

Dunlop, J., Kamenz, C. & Scholtz, G. (2007) Reinterpreting the morphology of the Jurassic scorpion *Liassoscorpionides*. Arthropod Structure and Development 36: 245-252

Brösing, A., Richter, S. & Scholtz, G. (2007) Phylogenetic analysis of the Brachyura (Crustacea, Decapoda) based on characters of the foregut with establishment of a new taxon. Journal of Zoological Systematics and Evolutionary Research 45: 20-32

Wolff, C. & Scholtz, G. (2008) The clonal composition of biramous and uniramous arthropod limbs. Proceedings of the Royal Society B 275, 1023-1028.

Kamenz, C., Dunlop, J.A., Scholtz, G., Kerp, H. & Hass, H. (2008) Microanatomy of Early Devonian book lungs. Biology Letters 4: 212-215.

Zantke, J., Wolff, C. & Scholtz, G. (2008) Three-dimensional reconstruction of the central nervous system of *Macrobiotus hufelandi* (Eutardigrada, Parachela): implications for the phylogenetic position of Tardigrada. Zoomorphology 127: 21-36.

Ungerer, P. & Scholtz, G. (2008) Filling the gap between neuroblasts and identified neurons in crustaceans adds new support for Tetraconata. Proceedings of the Royal Society B 275, 369-376.

Semmler, H., Wanninger, A., Høeg, J.T. & Scholtz, G. (2008) Immunocytochemical studies on the naupliar nervous system of *Balanus improvisus* (Crustacea, Cirripedia, Thecostraca). Arthropod Structure and Development 37: 383-395.

Scholtz, G. (2008) Zoological detective stories: the case of the facetotectan life cycle. Journal of Biology 7: 16.

Brenneis, G., Ungerer, P. & Scholtz, G. (2008) The chelifores of sea spiders (Arthropoda, Pycnogonida) are the appendages of the deutocerebral segment. Evolution and Development 10: 717-724.

Poschmann, M., Dunlop, J. A., Kamenz, C. & Scholtz, G. (2008) The Lower Devonian scorpion *Waeringoscorpio* and the respiratory nature of its filamentous structures, with a description of a new species from the Westerwald area, Germany. *Paläontologische Zeitschrift* 82: 418-436.

Scholtz, G. (2008) Scarab beetles at the interface of wheel invention in nature and culture? *Contributions to Zoology* 77: 139-148.

Semmler, H., Høeg, J.T., Scholtz, G. & Wanninger, A. (2009) Three-dimensional reconstruction of the naupliar musculature and a scanning electron microscopy atlas of nauplius development of *Balanus improvisus* (Crustacea: Cirripedia: Thoracica). *Arthropod Structure and Development* 38: 135-145.

Pabst, T. & Scholtz, G. (2009) The development of phyllopodous limbs in Leptostraca and Branchiopoda. *Journal of Crustacean Biology* 29: 1-12.

Koenemann, S., Olesen, J., Alwes, F., Iliffe, T., Wolff, C., Ungerer, P. & Scholtz, G. (2009) Postembryonic development of Remipedia: New data, additional insights. *Development Genes and Evolution* 219: 131-145.

Ungerer, P. & Scholtz, G. (2009) Cleavage and gastrulation in *Pycnogonum litorale* (Arthropoda, Pycnogonida): morphological support for the Ecdysozoa? *Zoomorphology* 128: 263-274.

Scholtz, G., Ponomarenko, E. & Wolff, C. (2009): Cirripede cleavage patterns and the origin of the Rhizocephala (Crustacea: Thecostraca). *Arthropod Systematics and Phylogeny* 67: 219-228.

Kawai, T., Scholtz, G., Morioka, S., Ramanamandimby, Y., Lukhaup, C. & Hanamura Y. (2009) Parthenogenetic alien crayfish (Decapoda: Cambaridae) spreading in Madagascar. *Journal of Crustacean Biology* 29: 562-567.

Biffis, C., Alwes, F. & Scholtz, G. (2009) Cleavage and gastrulation of the dendrobranchiate shrimp *Penaeus monodon* (Crustacea, Malacostraca, Decapoda). *Arthropod Structure and Development* 38: 527-540.

Scholtz, G. (2010): Deconstructing morphology. *Acta Zoologica* 91: 44–63.

Fischer, A. & Scholtz, G. (2010) Axogenesis in the stomatopod crustacean *Gonodactylaceus falcatus* (Malacostraca). *Invertebrate Biology* 129: 59-76.

Machner, J. & Scholtz, G. (2010) A scanning electron microscopy study of the embryonic development of *Pycnogonum litorale* (Arthropoda, Pycnogonida). *Journal of Morphology* 271: 1306-1318.

Martin, P., Dorn, N.J., Kawai, T., van der Heiden, C. & Scholtz, G. (2010) The enigmatic Marmorkrebs (marbled crayfish) is the parthenogenetic form of *Procambarus fallax* (Hagen, 1870), *Contributions to Zoology* 79: 107-118.

Martin, P., Shen, H., Füllner, G. and Scholtz, G. (2010) The first record of the parthenogenetic Marmorkrebs (Decapoda, Astacida, Cambaridae) in the wild in Saxony (Germany) raises the question of its actual threat to European freshwater ecosystems. *Aquatic Invasions* 5: 397–403.

Richter, S., Loesel, R., Purschke, G., Schmidt-Rhaesa, A., Scholtz, G., Stach, T., Vogt, L., Wanninger, A., Brenneis, G., Doring, C., Faller, S., Fritsch, M., Grobe, P., Heuer, C.M., Kaul, S., Moller, O.S., Muller, C.H.G., Rieger, V., Rothe, B.H., Stegner, M.E.J. & Harzsch, S. (2010) Invertebrate neurophylogeny: suggested terms and definitions for a neuroanatomical glossary. *Frontiers in Zoology* 7: 29.

Fischer, A., Pabst, T. & Scholtz, G. (2010) Germ band differentiation in the stomatopod *Gonodactylaceus falcatus* and the origin of the stereotyped cell division pattern in Malacostraca (Crustacea). *Arthropod Structure and Development* 39: 411-422.

Scholtz, G. (2011) Mikroästhetik - Bilder von historischen histologischen Präparaten der Zoologischen Lehrsammlung der Humboldt-Universität zu Berlin. *Mikrokosmos* 100: 280-285.

Reimann, A., Richter, S. & Scholtz, G. (2011): Phylogeny of the Anomala (Crustacea, Decapoda, Reptantia) based on the ossicles of the foregut. *Zoologischer Anzeiger* 250: 316-342.

Brenneis, G., Arango, C.P. & Scholtz, G. (2011a) Morphogenesis of *Pseudopallene* sp. (Pycnogonida, Callipallenidae) I: Embryonic development. *Development Genes and Evolution* 221: 309-328.

Brenneis, G., Arango, C.P. & Scholtz, G. (2011b) Morphogenesis of *Pseudopallene* sp. (Pycnogonida, Callipallenidae) II: Postembryonic development. *Development Genes and Evolution* 221: 329-350.

Hippler, D., Hu, N., Steiner, M., Scholtz, G. & Franz, G. (2012) Experimental mineralization of crustacean eggs: new implications for the fossilization of Precambrian–Cambrian embryos. *Biogeosciences* 9: 1765-1775.

Martin, P. & Scholtz, G. (2012): A case of intersexuality in the parthenogenetic Marmorkrebs (Decapoda: Astacida: Cambaridae). *Journal of Crustacean Biology* 32: 345–35.

Pennerstorfer, M. & Scholtz, G. (2012) Early cleavage in *Phoronis muelleri* (Phoronida) displays spiral features. *Evolution & Development* 14: 484-500.

Shen, H., Braband, A. & Scholtz, G. (2013) Mitogenomic analysis of decapod crustacean phylogeny corroborates traditional views on their relationships. *Molecular Phylogenetics and Evolution* 66: 776-789.

Bohman, P., Edsman, L., Martin, P. & Scholtz, G. (2013) The first Marmorkrebs (Decapoda: Astacida: Cambaridae) in Scandinavia. *BioInvasions Records* 2: 227–232.

Brenneis, G., Stollewerk, A. & Scholtz, G. (2013) Embryonic neurogenesis in *Pseudopallene* sp. (Arthropoda, Pycnogonida) includes two subsequent phases with similarities to different arthropod groups. *EvoDevo* 4: 32.

Scholtz, G. (2013) A plea for 'genealogical thinking' in comparative biology – a rebuttal to the reply of Szucsich, Wirkner, and Pass to my article 'Deconstructing Morphology'. *Acta Zoologica* 94: 218-221.

Scholtz, G. (2014) Evolution of crabs – history and deconstruction of a prime example of convergence. *Contributions to Zoology* 83: 87-105.

Brenneis, G. & Scholtz, G. (2014) The 'Ventral Organs' of Pycnogonida (Arthropoda) are neurogenic niches of late embryonic and post-embryonic nervous system development. *PLoS One* 9(4): e95435.

Scholtz, G., Ng, P.K.L. & Moore, S. (2014) A crab with three eyes, two rostra, and a dorsal antenna-like structure. *Arthropod Structure and Development* 43: 163-173.

Scholtz, G. (2014) Verbundene Zwillinge bei Krebsen. *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 50 (N.F.): 173-188.

Klann, M. & Scholtz, G. (2014) Early embryonic development of the freshwater shrimp *Caridina multidentata* (Crustacea, Decapoda, Atyidae). *Zoomorphology* 133: 295-306.

Alwes, F. & Scholtz, G. (2014) The early development of the onychopod cladoceran *Bythotrephes longimanus* (Crustacea, Branchiopoda). *Frontiers in Zoology* 11: 10.

Brenneis, G. & Scholtz, G. (2015) Serotonin-immunoreactivity in the ventral nerve cord of Pycnogonida – support for individually identifiable neurons as ancestral feature of the arthropod nervous system. *BMC Evolutionary Biology* 15:136.

Reindl, A., Strobach, T., Becker, C., Scholtz, G. & Schubert, T. (2015) Crab or lobster? Mental principles underlying the categorization of crustaceans by biology experts and non-experts. *Zoologischer Anzeiger* 256: 28-35.

Shen, H., Braband, A. & Scholtz, G. (2015) The complete mitogenomes of lobsters and crayfish (Crustacea: Decapoda: Astacidea) reveal surprising differences in closely related taxa and convergences to Priapulida. *Journal of Zoological Systematics and Evolutionary Research* 53: 273-281.

Liu, Y., Scholtz, G. & Hou, X. (2015) When a 520 million-year-old Chengjiang fossil meets a modern micro-CT – a case study. *Scientific Reports* 5: 12802.

Martin, P., Thonagel, S. & Scholtz G. (2016) The parthenogenetic Marmorkrebs (Malacostraca: Decapoda: Cambaridae) is a triploid organism. *Journal of Zoological Systematics and Evolutionary Research* 54: 13-21.

Scholtz, G. & Brenneis, G. (2016) A specimen of *Pycnogonum litorale* (Arthropoda, Chelicerata, Pycnogonida) with a supernumerary leg is in agreement with the 'boundary model' of appendage formation. *The Science of Nature* 103: 13.

Becker, C. & Scholtz, G. (2016) Phylogenetic implications of sperm storage in Podotremata - Histology and 3D-reconstructions of spermathecae and gonopores in female carrier crabs (Decapoda: Brachyura: Homoloidea). *Journal of Morphology* (in press).

## Book Chapters

*Mostly peer reviewed*

Sandeman, D. & Scholtz, G. (1995) Ground plans, evolutionary changes, and homologies in decapod crustacean brains. In: Breidbach O. & Kutsch W. (eds.). *The Nervous Systems of Invertebrates: An Evolutionary and Comparative Approach*. Birkhäuser, Basel, pp. 329-347.

Scholtz, G. (1997) Cleavage, germ band formation and head segmentation: the ground pattern of the Euarthropoda. In: Fortey R.A. & Thomas R.H. (eds.). *Arthropod Relationships*. Chapman & Hall, London, pp. 317-332.

Scholtz, G. (2002) Phylogeny and Evolution. In: Holdich, D. M. (ed.). *Biology of Freshwater Crayfish*. Blackwell Science, Oxford, pp. 30-52, plates 10-16.

Scholtz, G. & Gerberding, M. (2002) Cell lineage of crustacean neuroblasts. In: Wiese, K. (ed.). *The Crustacean Nervous System*. Springer, Berlin, pp. 406-416.

Scholtz, G. (2003) Is the taxon Articulata obsolete? Arguments in favour of a close relationship between annelids and arthropods. In: Legakis, A., Sfenthourakis, S., Polymeni, R. & Thessalou-Legaki, M. (eds.). *The New Panorama of Animal Evolution, Proceedings of the 18th International Congress of Zoology*. Pensoft, Sofia, pp. 489-501.

Scholtz, G. (2004) Baupläne versus ground patterns, phyla versus monophyla: aspects of patterns and processes in evolutionary developmental biology. In: Scholtz, G. (ed.). *Evolutionary Developmental Biology of Crustacea*. A.A.Balkema, Lisse, pp. 3-16.

Dohle, W., Gerberding, M., Hejnol, A. & Scholtz, G. (2004) Cell lineage, segment differentiation, and gene expression in Crustaceans. In: Scholtz, G. (ed.). *Evolutionary Developmental Biology of Crustacea*. A.A.Balkema, Lisse, pp. 95-133.

Gruner, H.-E. & Scholtz G. (2004) Segmentation, tagmata, and appendages. In: Forest, J., von Vaupel Klein, J.C. & Schram, F.R. (eds.). *Treatise on zoology - Anatomy, taxonomy, biology. The Crustacea revised and updated from the Traité de Zoologie*. Koninklijke Brill, Leiden, 1, pp. 13-57.

Scholtz, G. & Edgecombe, G.E. (2005) Heads, Hox and the phylogenetic position of trilobites. In: Koenemann, S. & Jenner, R.A. (eds.). *Crustacea and Arthropod Relationships*. CRC Press, Boca Raton, pp. 139-165.

Jenner, R.A. & Scholtz, G. (2005) Playing another round of metazoan phylogenetics: Historical epistemology, sensitivity analysis, and the position of Arthropoda within the Metazoa on the basis of morphology. In: Koenemann, S. & Jenner, R.A. (eds.). Crustacea and Arthropod Relationships. CRC Press, Boca Raton, pp. 356-385.

Scholtz, G. (2008) On comparisons and causes in evolutionary developmental biology. In: Minelli, A. & Fusco, G. (eds.) Evolving Pathways: Key Themes in Evolutionary Developmental Biology. Cambridge University Press, Cambridge, pp. 144-159.

Scholtz, G., Abzhanov, A., Alwes, F., Biffis, C. & Pint, J. (2009) Development, genes, and decapod evolution. In: Martin, J.W., Crandall, K.A., & Felder D.L. (eds.). Decapod Crustacean Phylogenetics. CRC Press, Boca Raton, pp. 31- 46.

Scholtz, G. & McLay, C.L. (2009) Is the Brachyura Podotremata a monophyletic group? In: Martin, J.W., Crandall, K.A., & Felder D.L. (eds.). Decapod Crustacean Phylogenetics. CRC Press, Boca Raton, pp. 417- 435.

Scholtz, G. (2009) Differenzieren und Synthesieren: Zwei Formen des Vergleichens in der Biologie. In: Fischel, A. (ed.) Grenzbilder, Bildwelten des Wissens, Kunsthistorisches Jahrbuch für Bildkritik (eds. Bredekamp, H., Bruhn, M. & Werner, G.) ,6.2. Akademie Verlag, Berlin, pp. 70-78.

Baba, K., Fujita, Y., Wehrmann, I.S. & Scholtz, G. (2011) Developmental biology of squat lobsters. In: Poore, G.C.B., Ahyong, S.T. & Taylor, J. (eds.). The Biology of Squat Lobsters. CSIRO-Publishing, Collingwood, pp. 105-148.

Scholtz, G. (2013) Versuch einer analytischen Morphologie. In: Bruhn, M. & Scholtz, G. (eds.). Morphologien. Bildwelten des Wissens, Kunsthistorisches Jahrbuch für Bildkritik (Eds. Bredekamp, H., Bruhn, M. & Werner, G.), 9.2. Akademie Verlag, Berlin, pp. 30-44.

Scholtz, G. & Wolff, C. (2013) Arthropod embryology: cleavage and germ band development. In Minelli, A., Boxshall, G. & Fusco G. (eds.). Arthropod Biology and Evolution. Springer, Heidelberg, pp. 63-90.

Scholtz, G. (2013) Subclass Hoplocarida, order Stomatopoda: Embryonic Development. In: Forest, J., von Vaupel Klein, J.C. & Schram, F.R. (eds.). Treatise on zoology - Anatomy, taxonomy, biology. The Crustacea revised and updated from the Traité de Zoologie. Koninklijke Brill, Leiden, 4A, pp. 243-257.

Scholtz, G. (2014) *Astacus fluviatilis*. Wachsmodellserie zur Entwicklung des Flusskrebses. In Ludwig, D., Weber, C. & Zauzig, O. (eds.). Das materielle Modell – Objektgeschichten aus der wissenschaftlichen Praxis. Wilhelm Fink, Paderborn, pp. 41-51.

Scholtz, G. (2015) Morphologische Modelle von Tieren und Pflanzen – veraltet oder auf dem Weg zu neuer Blüte? In Grotz, K. (ed.). Modellschau – Perspektiven auf Botanische Modelle (Ausstellungskatalog), Botanischer Garten und Botanisches Museum, Berlin, pp. 60-65.

Seliger, A., Jirikowski, G. & Scholtz, G. (2015) Morphologische Analysen vegetabiler Ornamente der Gotik – Eine interdisziplinäre Annäherung an kunsthistorische Reihen. In: Bredekamp, H. & Schäffner, W. (eds.). Haare hören – Strukturen wissen – Räume agieren. Berichte aus dem Interdisziplinären Labor Bild Wissen Gestaltung. transcript, Bielefeld, pp. 61-77

Scholtz, G. (2016) Happy Birthday! The first decade of Marmorkrebs research—results and perspectives. In: Kawai, T., Faulkes, Z. & Scholtz, G. (eds.). Freshwater Crayfish - A Global Overview. CRC Press, Boca Raton, pp. 3-12.

Scholtz, G. (2016) Heads and brains in arthropods: 40 years after the ‘endless dispute’. In: Schmidt-Rhaesa, A., Harzsch, S. & Purschke, G. (eds.). Structure and Evolution of Invertebrate Nervous Systems. Cambridge University press, Cambridge, pp. 402-410.

Scholtz, G. (2016) Die Evolution als Gestalterin. In: Doll, N., Bredekamp, H. & Schäffner W. (eds.). +ultra. gestaltung schafft wissen. Seemann, Leipzig, pp. 115-120.

Scholtz, G. (in press) Zoologische Lehrsammlung (Zoological Teaching Collection) of the Humboldt-Universität zu Berlin. In: Beck, L.A. (ed.). Zoological Collections of Germany – The animal kingdom in its amazing plenty at museums and universities. Springer, Berlin.

## **Edited books and special issues**

Scholtz, G. (1997) Editor: Cell lineage and cell fate in animals. Seminars in Cell and Developmental Biology 8: 339-400.

Scholtz, G. (2004) Editor: Evolutionary Developmental Biology of Crustacea. A.A. Balkema Publishers, Lisse.

Deutsch, J. S. & Scholtz, G. (2006) Editors: Development and Phylogeny of Arthropods Special issue of Development Genes and Evolution 216: 355-498.

Bruhn, M. & Scholtz, G. (2013) Editors: Morphologien. Bildwelten des Wissens, Kunsthistorisches Jahrbuch für Bildkritik, 9.2. Akademie Verlag, Berlin.

Scholtz, G. (2015) Editor: Special issue on the 3<sup>rd</sup> International Congress on Invertebrate Morphology (ICIM 3). Zoologischer Anzeiger 256: 1-104

Kawai, T., Faulkes, Z. & Scholtz, G. (2016) Editors: Freshwater Crayfish: A Global Overview. CRC Press, Boca Raton.

## **Book reviews and other publications**

- Scholtz, G. (1997) Glasmodell eines marinen Polychaeten aus der Werkstatt von Leopold und Rudolf Blaschka, In: von Campenhausen, C. (ed.). Andenken Zoologischer Vergangenheit. Mainz, pp. 78-79.
- Scholtz, G. (1997) Introduction: Cell lineage and cell fate in animals. Seminars in Cell and Developmental Biology 8: 339-340.
- Scholtz, G. (1999) Systematik im Aufbruch. Biologie in unserer Zeit 1: 55.
- Scholtz, G. (1999) Krebstierforscher tagen in Berlin. Humboldt Zeitung (1999).
- Scholtz, G. (2000) Traditionreich und höchst aktuell – Die Zoologische Lehrsammlung des Instituts für Biologie; Dinge, die man sonst nicht sieht – Der Einsatz der Zoologischen Lehrsammlung heute; Von der Ästhetik des Lernens I – Die Modelle der Zoologischen Lehrsammlung; Die Evolution der Flusskrebse – Zoologische Lehrsammlung und aktuelle Forschung; Vom Tier zum Mythos- Die Beziehung von Zoologie und Kulturgeschichte. In: Bredekamp, H., Brüning, J. & Weber, C. (eds.). Theater der Natur und Kunst/Katalog. Henschel, Berlin, pp.182-183, 185, 187, 193-194, 195-196.
- Scholtz, G. (2002) Book review: Wie Gene die Entwicklung steuern. Die Geschichte der Homeobox von W. Gehring. Naturwissenschaftliche Rundschau, 55, 1: 49-51.
- Scholtz, G. (2002) Rede zur Eröffnung der Ausstellung "Wölfe, Opferhunde, Karrenköter - Berliner Hundeleben von der Eiszeit bis heute" In den naturwissenschaftlichen Sammlungen im Stadtmuseum Berlin. In: Gützer, R. (ed.). Jahrbuch Stiftung Stadtmuseum Berlin Band VII, 2001. Henschel Verlag, Berlin, pp. 550-553.
- Scholtz, G. (2004) Preface. In: Evolutionary Developmental Biology of Crustacea (ed. G. Scholtz), A.A.Balkema, Lisse, pp. IX-XI.
- Scholtz, G. & Herrmannstädtler, A. (2004) Tiermodelle - Modelltiere. Humboldt 18.11.04 p10.
- Scholtz, G. (2005) Better than the real thing? Book review of "Models - The Third Dimension of Science" (eds. de Chadarevian, S., Hopwood, N.) Acta Zoologica 86: 3.
- Scholtz, G. (2006): Book Review of “Decapoden der Schweiz” Entomologische Beiträge.
- Deutsch, J. S., Scholtz, G. & Hartenstein, V. (2006) Development Genes and Evolution special issue: Development and Phylogeny of Arthropods - a foreword from the editors. Development Genes and Evolution. 216: 355-356.
- Schram, F.R., Ahyong, S.T., Crandall, K.A., Gherardi, F., Grygier, M.J., Lavalli, K.L., Poore, G., Rogers, D.C., Scholtz, G., Simon, T., Tamone, S. & Wicksten, M. (2008) Publication in the Journal of Crustacean Biology. Journal of Crustacean Biology 28:197-202.

Scholtz, G. (2010) Die Lehrsammlung der Zoologie In: Hennig, J. & Andraschke, U. (eds.). Weltwissen 300 Jahre Wissenschaften in Berlin. Hirmer Verlag, München, pp. 286-290.

Scholtz, G. (2012) Comment on “Gerhard Scholtz Recipient of the Crustacean Society Excellence in Research Award.” Journal of Crustacean Biology 32: 343-344.

Bruhn, M. & Scholtz, G. (2013) Editorial: In: Bruhn, M. & Scholtz, G. (eds.). Morphologien. Bildwelten des Wissens, Kunsthistorisches Jahrbuch für Bildkritik (eds. Bredekamp, H., Bruhn, M. & Werner, G.), 9.2. Akademie Verlag, Berlin, pp. 5-6.

Scholtz, G. (2013) *Eocarcinus praecursor* - Der *Archaeopteryx* der Krabben. Cluster-Zeitung 20: 5-6.

Scholtz, G. & Scholtz, F. (2013) Phylogenetische Analyse von Kunst. Cluster-Zeitung 42: 5-8.

Scholtz, G. (2014) A cookbook for experimental embryology. Evolution & Development 16: 320-321.

Scholtz, G. (2015) Editorial: ICIM 3. Zoologischer Anzeiger 256: 1.

Kawai, T., Faulkes, Z. & Scholtz, G. (2016) Preface. In: Kawai, T., Faulkes, Z. & Scholtz, G. (eds.). Freshwater Crayfish - A Global Overview. CRC Press, Boca Raton, pp. v-vi.