**Table 1. Characteristic fauna of hypoxic coastal settings. See text discussions for citations.**

| Location | Mat-Forming Microbes | Foraminifera | Polychaetes | Molluscs | Crustaceans | Other Invertebrates | Fishes | Notable Phenomena | Exacerbating Factors |
|---|---|---|---|---|---|---|---|---|---|
| **Seasonal** | | | | | | | | | |
| Louisiana Shelf | *Beggiatoa* | *Pseudononion atlanticum, Epistominella vitrea, Buliminella morgani* (mid shelf); *Ammonia parkinsoniana* (inner shelf) | *Ampharete, Magelona tolerant through hypoxic months, Paraprionospio pinnata, Mediomastus ambiseta, Sigambra tentaculata,* at initiation and end of hypoxia | | | *Aspidosiphon sp.* (Sipuncula) | | Hypoxia is a summer phenomenon, areal cover of hypoxia varies each summer. Hurricanes reduce hypoxic area | Nutrient inputs from the Mississippi River watershed |
| Chesapeake Bay | | *Ammonia parkinsoniana (Elphidium selseyensis, Ammobaculites exiguus* intolerant) | *Paraprionospio pinnata, Polydora ligni, Streblospio benedicti, Mediomastus ambiseta, Leitoscoloplos fragilis, Glycinde solitaria, Eteone heteropoda Asabellides oculata.* | *Mulinia lateralis* | Ostracod - *Cytheromorpha curta* | | Spot (*Leiostomus xanthurus*), Croaker (*Micropogonias undulatus*) | Habitat compression of fishes, prey behavior enhances food for fishes, oyster reef loss with cascading effects on community and trophic structure. Loss of biomass, biodiversity and long-lived macrofauna | Eutrophication, overfishing (oysters) |
| Changjiang Estuary & Inner Shelf | | | *Glycera chirori* | *Thyasira tokunagai* | *Callianassa japonica* | | *Trichiurus lepturus*, *Larimichthys polyacti* and *Portunus trituberculatus* | Macro- and meiofaunal density drops in hypoxic area, aggregations of megafauna at edges. Collapses of benthos and conversion to pelagic system | Eutrophication, invasions via ballast water |
| Scandinavian and Scottish fjords | | *Stainforthia fusiformis, Spiroplectammina biformis, Bulimina marginata* | *Heteromastus filiformis*, *Melinna cristata*, *Spiophanes kroyeri, Capitella capitata, Scalibregma inflatum (fish farms)* | *Abra nitida, Thyasira equlis*. *Thyasira sarsi* | | *Amphiura chiajei, A. filiformis* (Ophiuroidea) | | Limited flushing increases influence of human activities, mussels can exacerbate hypoxia | pulp mill, aquaculture, sewage inputs |
| Chilean Shelf | *Thioploca* spp. | | *Paraprionospio pinnata, Mediomastus branchiferus, Aricidea pigmentata, Nephtys ferruginea and Cossura chilensis* | | | | | ENSO cycles modify seasonal patterns. El Niño improves oxygenation, attenuating seasonality and favoring larger, deeper-dwelling taxa | La Niña |
| Peru Shelf, Ancon Bay 15 m | | | *Owenia collaris*, *Magelona phyllisae*, *Chaetozone* sp. and *Phoronis* sp. | | *Ampelisca araucana* | | | | |
| Pakistan shelf, 140 m | *Thioploca* spp. | *Uvigerina semiornata* | Cirratulidae and Spionidae dominant | | | | | Seasonal, order of magnitude decline in oxygen following SW monsoon, corresponds to density declines in Spionidae and Flabelligeridae | |
| W. Indian inner shelf | | | *Prionospio, Cirriformia afer, Cossura coasta, Sternaspis scutata* | | *Metapenaeus dobsoni* | | *Synagris japonicus* | Monsoon-driven upwelling, seasonal sulfide exposure | Atmospheric nutrient enrichment, domestic and industrial waste disposal |
| W. Indian outer shelf | | Rectilinear bi- and tri-serial taxa (e.g. *Bolivina* and *Bulimina, Fursenkoina)* | *Prionospio pinnata, Lepidonotus carinulatus, Ancistrosyllis constricta, Syllis spongicola, Amphicteis gunneri, Notomastus aberrans and Cirratulis cirratus* | | | | | | |
| Benguela outer shelf | | | | | | | *Merluccius paradoxus, M. capensis* | Benguela Niños can move the system from seasonal to persistent hypoxia | Ocean warming trends may be intensifying seasonality |
| Japanese bays | | *Ammonia beccarii, Trochammina hadai, Eggerella advena, Uvigerinella glabra. Also Virgulinella fragilis* in sulphidic habitat (Namako-ike, Japan) | | | Ostracods - *Bicornucythere bisanensis, B.* sp., *Cytheromorpha acupunctata, Loxooconcha viva* | | | | |

**Table 1 (continued). Characteristic fauna of hypoxic coastal settings. See text discussions for citations.**

| Location | Mat-Forming Microbes | Foraminifera | Polychaetes | Molluscs | Crustaceans | Other Invertebrates | Fishes | Notable Phenomena | Exacerbating Factors |
|---|---|---|---|---|---|---|---|---|---|
| **Permanent** | | | | | | | | | |
| Black Sea | | *Ammonia*, Monothalamous taxa including *Psammophaga* | *Protodrilus* sp. and *Victorniella zaikai* | *Mytilus galloprovincialis* | | | | Mussels keep phytoplankton blooms in check. Loss of mussels led to cascade, shift to domination by comb jellies *Mnemiopsis leydi* | Overfishing, species invasion |
| Baltic Sea | | | *Scoloplos armiger, Capitella sp., Pygospio elegans* | *Macoma baltica* | *Saduria entomon, Diastylis rathkei and Pontoporeia femorata.* Ostracods *Cyprideis torosa, Heterocyprideis sorbyana, Candona neglecta* | *Halicryptus spinulosus (Priapula), Amphiura sarsi (Ophiuroidea)* | | | Eutrophication |
| Peru, Ancon Bay (34 m and below) | | | *Paraprionospio pinnata, M. phyllisae, Chaetozone sp. and Leitoscoloplos chilensis* | | | | | El Niño improves oxygenation and leads to colonization by scallops, octopus and whelks | |
| Benguela inner shelf | *Beggiatoa, Thiomargarita namibiensis, Thioploca* | *Virgulinella fragilis* occurs in Walvis Bay, Namibia. Characteristic species for sulphidic environments (Tsuchiya et al., 2008) | *Diopatra sp., Paraprionospio sp. Nephtys sp., Sygambra sp., Pectinaria sp., Hesionidae* | | *Bathynecties piperitus* | | *Sufflogobius bibarbatus* | Eruptions of hydrogen sulfides create anoxic water columns and gas release visible from satellites. Microbial mats are capable of consuming much of the slow sulfide flux | Algal blooms occur coincident with hypoxia. Lobster 'walkouts' generate mass mortality of a key fisheries species |