**Supplementary Figure 1**. Theoretical pressure state curves used to assign sensitivity values.

**Supplementary Figure 2-** Trawling effort distribution per year in case studies A2

**Supplementary Figure 3-** A)Distribution of the ‘upper bathyal sediment’ MSFD broad habitat (case study A2); B) Mean trawling effort distribution for the study period

**Supplementary Figure 4**. Other indicators performance across pressure gradient by case study. Rows- case studies: 1- A1) DEMERSALES offshore circalitoral sand, 2- A2) DEMERSALES upper bathyal sediment, 3- B) Ría de Vigo, infralittoral mud (Pollution), 4- C) UK Waters, offshore circalittoral sand, 5- D) Flemish Cap, mid bathyal sediment, and 6- E) Seco de los Olivos seamount, upper bathyal sediment. Columns- indicators: left -total abundance, center- Margalef index (species richness for case study E), right- Shannon diversity index.

**SUPPLEMENTARY FIGURE 1.**

Chart

Description automatically generated

**SUPPLEMENTARY FIGURE 2**

Diagram

Description automatically generated

**SUPPLEMENTARY FIGURE 3**

Chart

Description automatically generated

**SUPPLEMENTARY FIGURE 4**

Diagram, engineering drawing

Description automatically generated

**Supplementary Table 1-** Traits and BESITO value of the case study A1, A2, B, C and E.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AphiaID | SPECIES | SIZE | LONGEVITY | MOTILITY | ATTACHMENT | BENTHIC POSITION | FLEXIBILITY | FRAGILITY | FEEDING HABIT | BESITO | PHYLUM | REFERENCE CODE |
| 130343 | *Aglaophamus agilis* | 2 | 3 | 3 | 1 | 1 | 1 | 3 | 1 | 2 | Annelida | 1 - 71 |
| 129240 | *Aphelochaeta* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 129840 | *Aphrodita aculeata* | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Annelida |  |
| 130452 | *Aponuphis bilineata* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 1 | 1 | Annelida |  |
| 110363 | *Bonellia viridis* | 2 | 3 | 3 | 2 | 3 | 1 | 3 | 3 | 3 | Annelida |  |
| 129242 | *Chaetozone* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 129826 | *Chloeia venusta* | 2 | 2 | 3 | 1 | 1 | 1 | 3 | 1 | 2 | Annelida |  |
| 129346 | *Clymenura* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 129347 | *Euclymene* | 3 | 1 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Annelida |  |
| 130989 | *Filograna implexa* | 3 | 1 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | Annelida |  |
| 146950 | *Galathowenia oculata* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 130123 | *Glycera lapidum* | 3 | 2 | 3 | 1 | 1 | 1 | 3 | 1 | 2 | Annelida |  |
| 130126 | *Glycera oxycephala* | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Annelida |  |
| 130140 | *Goniada maculata* | 2 | 1 | 3 | 1 | 3 | 1 | 3 | 1 | 1 | Annelida |  |
| 571832 | *Harmothoe glabra* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 1 | Annelida |  |
| 130770 | *Harmothoe impar* | 3 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Annelida |  |
| 130464 | *Hyalinoecia tubicola* | 3 | 1 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Annelida |  |
| 129844 | *Laetmonice filicornis* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 1 | Annelida |  |
| 131495 | *Lanice conchilega* | 3 | 1 | 3 | 3 | 3 | 1 | 3 | 3 | 3 | Annelida |  |
| 131127 | *Laonice bahusiensis* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Annelida |  |
| 131499 | *Loimia medusa* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 129337 | *Lumbrineris aniara* | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | Annelida |  |
| 130240 | *Lumbrineris cingulata* | 3 | 1 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | Annelida |  |
| 129892 | *Mediomastus fragilis* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 130357 | *Nephtys cirrosa* | 2 | 2 | 3 | 1 | 1 | 1 | 3 | 2 | 2 | Annelida |  |
| 130359 | *Nephtys hombergii* | 3 | 1 | 3 | 1 | 3 | 1 | 3 | 1 | 2 | Annelida |  |
| 130363 | *Nephtys kersivalensis* | 2 | 1 | 3 | 1 | 3 | 1 | 3 | 2 | 2 | Annelida |  |
| 129220 | *Notomastus* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 130544 | *Owenia fusiformis* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 1297885 | *Paucibranchia bellii* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 1 | 1 | Annelida |  |
| 334506 | *Phyllodoce groenlandica* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 1 | 1 | Annelida |  |
| 131516 | *Pista cristata* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Annelida |  |
| 129710 | *Polycirrus* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 130867 | *Sabellaria spinulosa* | 2 | 1 | 4 | 4 | 3 | 4 | 2 | 3 | 3 | Annelida |  |
| 131171 | *Scolelepis bonnieri* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 130537 | *Scoloplos armiger* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 131183 | *Spio filicornis* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 131187 | *Spiophanes bombyx* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 131188 | *Spiophanes kroyeri* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Annelida |  |
| 131077 | *Sthenelais limicola* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 2 | 1 | Annelida |  |
| 107477 | *Alpheus glaber* | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | Arthropoda | 72 - 110 |
| 101928 | *Ampelisca spinipes* | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 3 | 1 | Arthropoda |  |
| 107273 | *Atelecyclus rotundatus* | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107377 | *Bathynectes maravigna* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107268 | *Calappa granulata* | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107275 | *Cancer bellianus* | 3 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Arthropoda |  |
| 107369 | *Chaceon affinis* | 3 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Arthropoda |  |
| 107642 | *Chlorotocus crassicornis* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107197 | *Dardanus arrosor* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107643 | *Dichelopandalus bonnieri* | 3 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107302 | *Ebalia tumefacta* | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 106834 | *Galathea* sp. | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107374 | *Geryon trispinosus* | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107292 | *Goneplax rhomboides* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107327 | *Inachus dorsettensis* | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107387 | *Liocarcinus depurator* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107390 | *Liocarcinus marmoreus* | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 119936 | *Lophogaster typicus* | 1 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107397 | *Macropipus tuberculatus* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107342 | *Macropodia longipes* | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 205077 | *Macropodia* sp. | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107350 | *Maja squinado* | 3 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Arthropoda |  |
| 241154 | *Monodaeus couchii* | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107157 | *Munida intermedia* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 158398 | *Munida iris* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107163 | *Munida sarsi* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107166 | *Munida tenuimana* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107254 | *Nephrops norvegicus* | 3 | 2 | 3 | 2 | 1 | 1 | 2 | 1 | 2 | Arthropoda |  |
| 107230 | *Pagurus alatus* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107236 | *Pagurus excavatus* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107239 | *Pagurus prideaux* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 106854 | *Pagurus* sp. | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107703 | *Palinurus elephas* | 3 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Arthropoda |  |
| 107704 | *Palinurus mauritanicus* | 3 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Arthropoda |  |
| 106858 | *Parapagurus* sp. | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 106916 | *Parthenope* sp. | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107677 | *Pasiphaea sivado* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107035 | *Periclimenes* sp. | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107558 | *Philocheras echinulatus* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107046 | *Plesionika*  sp. | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107655 | *Plesionika antigai* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107660 | *Plesionika heterocarpus* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107661 | *Plesionika martia* | 3 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107696 | *Polycheles typhlops* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107563 | *Pontophilus norvegicus* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107564 | *Pontophilus spinosus* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107359 | *Rochinia carpenteri* | 2 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 106115 | *Scalpellum Scalpellum* | 2 | 2 | 4 | 4 | 3 | 3 | 2 | 3 | 3 | Arthropoda |  |
| 107709 | *Scyllarus arctus* | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107120 | *Solenocera membranacea* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 107605 | *Systellaspis debilis* | 2 | 1 | 1 | 1 | 3 | 1 | 2 | 1 | 1 | Arthropoda |  |
| 103743 | *Corella parallelogramma* | 2 | 2 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Chordata | 111 - 115 |
| 103733 | *Diazona violacea (colonia)* | 3 | 2 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Chordata |  |
| 103483 | *Solitary ascidiacea (Ascidia sp.)* | 3 | 2 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Chordata |  |
| 125371 | *Acanella arbuscula* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria | 116 - 171 |
| 125348 | *Acanthogorgia armata* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 125349 | *Acanthogorgia hirsuta* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 125293 | *Acanthogorgia hirsuta + Placogorgia coronata* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 100930 | *Actinauge richardi* | 2 | 2 | 4 | 2 | 3 | 1 | 2 | 3 | 3 | Cnidaria |  |
| 100931 | *Adamsia carciniopados* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Cnidaria |  |
| 125334 | *Alcyonium palmatum* | 3 | 3 | 4 | 4 | 4 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 125284 | *Alcyonium* sp. | 3 | 3 | 4 | 4 | 4 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 125285 | *Anthomastus* sp. | 2 | 3 | 4 | 4 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 103309 | *Antipathes dichotoma* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 103316 | *Antipathes subpinnata* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 125380 | *Bebryce mollis* | 2 | 3 | 4 | 4 | 3 | 1 | 3 | 4 | 4 | Cnidaria |  |
| 100946 | *Calliactis parasitica* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Cnidaria |  |
| 125405 | *Callogorgia verticillata* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 1369476 | *Caryophyllia cyathus* | 1 | 3 | 4 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria |  |
| 1288958 | *Caryophyllia smithii* | 1 | 3 | 4 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria |  |
| 1288958 | *Caryophyllia smithii (var. Clavus)* | 1 | 3 | 4 | 2 | 3 | 4 | 1 | 3 | 3 | Cnidaria |  |
| 135085 | *Caryophyllia* sp. | 1 | 3 | 4 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria |  |
| 128535 | *Cavernularia pusilla* | 2 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 283798 | *Cerianthus lloydii* | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 101011 | *Cerianthus membranaceus* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 869834 | *Chironephthya mediterranea* | 2 | 3 | 4 | 4 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 125416 | *Corallium rubrum* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 5 | Cnidaria |  |
| 117452 | *Corymorpha nutans* | 2 | 1 | 4 | 4 | 3 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 289791 | *Dendrobrachia fallax* | 2 | 3 | 4 | 4 | 3 | 1 | 3 | 4 | 4 | Cnidaria |  |
| 135185 | *Dendrophyllia cornigera* | 4 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 5 | Cnidaria |  |
| 135187 | *Dendrophyllia ramea* | 4 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 5 | Cnidaria |  |
| 100665 | *Edwardsiidae* | 2 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 125358 | *Ellisella paraplexauroides* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 101036 | *Epizoanthus paguriphilus* | 2 | 4 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 125366 | *Eunicella verrucosa* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 1431112 | *Flabellum chunii* | 2 | 3 | 4 | 2 | 3 | 4 | 1 | 3 | 3 | Cnidaria |  |
| 128506 | *Funiculina quadrangularis* | 4 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 128491 | *Halipteris* sp. | 4 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 125373 | *Isidella elongata* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 135198 | *Javania cailleti* | 1 | 3 | 4 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria |  |
| 128512 | *Kophobelemnon stelliferum* | 3 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 103326 | *Leiopathes glaberrima* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 135161 | *Lophelia pertusa* | 4 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 5 | Cnidaria |  |
| 117302 | *Lytocarpia myriophyllum* | 3 | 1 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | Cnidaria |  |
| 135209 | *Madrepora oculata* | 4 | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 5 | Cnidaria |  |
| 125383 | *Muriceides lepida* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 117809 | *Nemertesia antennina* | 3 | 1 | 4 | 4 | 4 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 117815 | *Nemertesia ramosa* | 3 | 1 | 4 | 4 | 4 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 125359 | *Nicella granifera* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 267631 | *Nidalia* sp. | 2 | 3 | 4 | 4 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 125421 | *Paralcyonium spinulosum* | 2 | 3 | 4 | 4 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 125387 | *Paramuricea clavata* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 125389 | *Paramuricea macrospina* | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 103328 | *Parantipathes larix* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 101055 | *Parazoanthus axinellae* | 2 | 3 | 4 | 4 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 182745 | *Parerythropodium coralloides* | 3 | 3 | 4 | 4 | 4 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 128517 | *Pennatula phosphore* | 3 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 128519 | *Pennatula rubra* | 3 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 128495 | *Pennatula sp.* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 290732 | *Phanopathes rigida* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 117196 | *Plumularia* sp. | 2 | 1 | 4 | 4 | 3 | 1 | 3 | 4 | 3 | Cnidaria |  |
| 128525 | *Protoptilum carpenterii* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 181504 | *Pteroeides griseum* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 128522 | *Pteroeides spinosum* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 383014 | *Savalia savaglia* | 4 | 4 | 4 | 4 | 4 | 1 | 3 | 3 | 5 | Cnidaria |  |
| 117233 | *Sertularella* sp. | 2 | 1 | 4 | 4 | 3 | 1 | 3 | 4 | 3 | Cnidaria |  |
| 101019 | *Sideractis glacialis* | 1 | 3 | 4 | 4 | 3 | 4 | 2 | 3 | 3 | Cnidaria |  |
| 125400 | *Swiftia dubia* | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Cnidaria |  |
| 125401 | *Swiftia pallida* | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Cnidaria |  |
| 125402 | *Swiftia rosea* | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Cnidaria |  |
| 125314 | *Swiftia* sp. | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Cnidaria |  |
| 128499 | *Umbellula* sp. | 3 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 128536 | *Veretillum cynomorium* | 3 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | 3 | Cnidaria |  |
| 125404 | *Villogorgia bebrycoides* | 2 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 125360 | *Viminella flagellum* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Cnidaria |  |
| 128539 | *Virgularia mirabilis* | 4 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | 4 | Cnidaria |  |
| 125064 | *Amphipholis squamata* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Echinodermata | 172 - 215 |
| 123985 | *Anseropoda placenta* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 123985 | *Anseropoda placenta* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 149880 | *Araeosoma fenestratum* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 124951 | *Asteronyx loveni* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 2 | 2 | Echinodermata |  |
| 123867 | *Astropecten irregularis* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 1 | Echinodermata |  |
| 124963 | *Astrospartus mediterraneus* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | 3 | Echinodermata |  |
| 124373 | *Brissopsis lyrifera* | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 3 | 2 | Echinodermata |  |
| 124331 | *Centrostephanus longispinus* | 3 | 2 | 2 | 1 | 3 | 1 | 4 | 1 | 2 | Echinodermata |  |
| 124004 | *Chaetaster longipes* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 124257 | *Cidaris cidaris* | 3 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Echinodermata |  |
| 241001 | *Echinaster sepositus* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 124392 | *Echinocardium cordatum* | 2 | 2 | 2 | 1 | 1 | 1 | 4 | 3 | 2 | Echinodermata |  |
| 124273 | *Echinocyamus pusillus* | 1 | 3 | 3 | 1 | 1 | 1 | 4 | 3 | 3 | Echinodermata |  |
| 124287 | *Echinus esculentus* | 3 | 3 | 2 | 1 | 3 | 1 | 4 | 1 | 3 | Echinodermata |  |
| 124294 | *Echinus melo* | 3 | 3 | 2 | 1 | 3 | 1 | 4 | 1 | 3 | Echinodermata |  |
| 532031 | *Gracilechinus acutus* | 3 | 3 | 2 | 1 | 3 | 1 | 4 | 1 | 3 | Echinodermata |  |
| 532032 | *Gracilechinus alexandri* | 2 | 3 | 2 | 1 | 3 | 1 | 4 | 1 | 3 | Echinodermata |  |
| 124501 | *Holothuria (Panningothuria) forskali* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 732401 | *Holothuria tubulosa* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 381759 | *Hymenodiscus coronata* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 124756 | *Laetmogone violacea* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Echinodermata |  |
| 124224 | *Leptometra celtica* | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 124226 | *Leptometra phalangium* | 3 | 2 | 3 | 2 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 123920 | *Luidia ciliaris* | 4 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Echinodermata |  |
| 178639 | *Luidia sarsi* | 3 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Echinodermata |  |
| 123803 | *Marthasterias glacialis* | 4 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Echinodermata |  |
| 816800 | *Mesothuria intestinalis* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 124048 | *Nymphaster arenatus* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 125110 | *Ophiactis balli* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Echinodermata |  |
| 125027 | *Ophiocomina nigra* | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Echinodermata |  |
| 125049 | *Ophiopsila aranea* | 3 | 2 | 2 | 1 | 1 | 1 | 3 | 3 | 2 | Echinodermata |  |
| 125131 | *Ophiothrix fragilis* | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 124913 | *Ophiura albida* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 3 | 2 | Echinodermata |  |
| 124929 | *Ophiura ophiura* | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Echinodermata |  |
| 124934 | *Ophiura sarsii* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 149898 | *Parastichopus regalis* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 124535 | *Parastichopus tremulus* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | 3 | Echinodermata |  |
| 124055 | *Peltaster placenta* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 1 | Echinodermata |  |
| 124343 | *Phormosoma placenta* | 2 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Echinodermata |  |
| 124080 | *Plinthaster dentatus* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 3 | Echinodermata |  |
| 123851 | *Pontaster tenuispinus* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 1 | Echinodermata |  |
| 124319 | *Psammechinus miliaris* | 2 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | 2 | Echinodermata |  |
| 123908 | *Psilaster andromeda* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 1 | 1 | Echinodermata |  |
| 124418 | *Spatangus purpureus* | 3 | 3 | 2 | 1 | 1 | 1 | 4 | 3 | 3 | Echinodermata |  |
| 124268 | *Stylocidaris affinis* | 3 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Echinodermata |  |
| 141436 | *Abra prismatica* | 1 | 1 | 2 | 1 | 3 | 1 | 4 | 3 | 2 | Mollusca | 216 - 247 |
| 138760 | *Aporrhais pespelecani* | 2 | 2 | 2 | 1 | 3 | 1 | 1 | 3 | 2 | Mollusca |  |
| 751348 | *Aporrhais serreseanus* | 2 | 2 | 2 | 1 | 3 | 1 | 1 | 3 | 2 | Mollusca |  |
| 140598 | *Bathypolypus sponsalis* | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 2 | Mollusca |  |
| 138362 | *Berthellina* sp. | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | 2 | Mollusca |  |
| 138865 | *Buccinum humphreysianum* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 138878 | *Buccinum undatum* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 141753 | *Calliostoma granulatum* | 1 | 1 | 2 | 1 | 3 | 1 | 1 | 1 | 0 | Mollusca |  |
| 138584 | *Calliostoma* sp. | 1 | 1 | 2 | 1 | 3 | 1 | 1 | 1 | 0 | Mollusca |  |
| 141101 | *Charonia lampas* | 3 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 138899 | *Colus gracilis* | 2 | 4 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 138903 | *Colus jeffreysianus* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 137704 | *Colus* sp. | 2 | 3 | 2 | 1 | 3 | 1 | 2 | 1 | 2 | Mollusca |  |
| 140600 | *Eledone cirrhosa* | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 2 | Mollusca |  |
| 140601 | *Eledone moschata* | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 2 | Mollusca |  |
| 140529 | *Euspira fusca* | 2 | 2 | 2 | 1 | 3 | 1 | 1 | 1 | 1 | Mollusca |  |
| 141861 | *Fusiturris similis* | 2 | 2 | 2 | 1 | 3 | 1 | 1 | 1 | 1 | Mollusca |  |
| 139024 | *Galeodea rugosa* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 140019 | *Gasteropteron meckeli* | 1 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | 1 | Mollusca |  |
| 138180 | *Mitra* sp. | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Mollusca |  |
| 139199 | *Mitrella gervillii* | 1 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Mollusca |  |
| 140048 | *Neopycnodonte cochlear* | 3 | 3 | 4 | 4 | 3 | 4 | 1 | 4 | 4 | Mollusca |  |
| 379789 | *Neopycnodonte zibrowii* | 3 | 3 | 4 | 4 | 3 | 4 | 1 | 4 | 4 | Mollusca |  |
| 141447 | *Neorossia caroli* | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 2 | 1 | Mollusca |  |
| 138922 | *Neptunea contraria* | 3 | 4 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 140604 | *Octopus salutii* | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 2 | Mollusca |  |
| 140605 | *Octopus vulgaris* | 4 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 2 | Mollusca |  |
| 140652 | *Opisthoteuthis agassizii* | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 2 | Mollusca |  |
| 140737 | *Phaxas pellucidus* | 2 | 2 | 3 | 1 | 1 | 1 | 4 | 3 | 3 | Mollusca |  |
| 140891 | *Pteria hirundo* | 2 | 3 | 4 | 3 | 3 | 4 | 2 | 4 | 4 | Mollusca |  |
| 140606 | *Pteroctopus tetracirrhus* | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 2 | Mollusca |  |
| 141115 | *Ranella olearium* | 3 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 141448 | *Rondeletiola minor* | 1 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | Mollusca |  |
| 141449 | *Rossia macrosoma* | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | Mollusca |  |
| 139488 | *Scaphander lignarius* | 2 | 2 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | Mollusca |  |
| 141443 | *Sepia elegans* | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | Mollusca |  |
| 141445 | *Sepia orbignyana* | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | Mollusca |  |
| 141452 | *Sepietta oweniana* | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | Mollusca |  |
| 138483 | *Sepiola* sp. | 2 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 1 | Mollusca |  |
| 138930 | *Troschelia berniciensis* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | 2 | Mollusca |  |
| 122348 | *Cerebratulus* | 4 | 1 | 3 | 1 | 1 | 1 | 3 | 1 | 2 | Nemertea | 248 |
| 128545 | *Phoronis* | 2 | 1 | 4 | 4 | 3 | 1 | 3 | 3 | 3 | Phoronida | 249 - 252 |
| 131893 | *Asbestopluma hypogea/ Lycopodina hypogea* | 1 | 2 | 4 | 4 | 4 | 1 | 3 | 2 | 3 | Porifera | 253 - 270 |
| 134410 | *Asconema setubalense* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Porifera |  |
| 597246 | *Geodia pachydermata* | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | Porifera |  |
| 132005 | *Geodia* sp. | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | Porifera |  |
| 370778 | *Hymedesmia paupertas* | 3 | 4 | 4 | 4 | 1 | 4 | 3 | 4 | 5 | Porifera |  |
| 134079 | *Pachastrella ovisternata* | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 5 | Porifera |  |
| 132509 | *Phakellia robusta* | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Porifera |  |
| 132511 | *Phakellia ventilabrum* | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Porifera |  |
| 134378 | *Pheronema carpenteri* | 3 | 4 | 4 | 4 | 3 | 3 | 3 | 4 | 5 | Porifera |  |
| 131818 | *Spongosorites* sp. | 3 | 3 | 4 | 4 | 4 | 3 | 3 | 4 | 5 | Porifera |  |
| 134106 | *Thenea muricata* | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 4 | 4 | Porifera |  |
| 410717 | *Aspidosiphon (Aspidosiphon) muelleri muelleri* | 2 | 2 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Sipuncula | 271 - 273 |
| 175026 | *Golfingia (Golfingia) elongata* | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | 2 | Sipuncula |  |

**Supplementary Table 1.** Traits of the case study D.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AphiaID | SPECIES | SIZE | LONGEVITY | MOTILITY | ATTACHMENT | BENTHIC POSITION | FLEXIBILITY | FRAGILITY | FEEDING HABIT | PHYLUM | REFERENCE CODE |
| 938 | Aphroditidae | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Annelida | 274.275. |
| 918 | Chaetopteridae | 3 | 1 | 3 | 4 | 1 | 1 | 3 | 3 | Annelida | 274.275. |
| 966 | Eunicidae | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Annelida | 274.275. |
| 129491 | *Harmothoe* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Annelida | 274.275. |
| 130305 | *Maldane sarsi* | 2 | 1 | 3 | 1 | 1 | 1 | 3 | 3 | Annelida | 274.275.276. |
| 22496 | Nereididae | 3 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Annelida | 274.275. |
| 939 | Polynoidae | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Annelida | 274.275. |
| 106182 | *Arcoscalpellum michelottianm\** | 2 | 3 | 4 | 4 | 3 | 4 | 1 | 3 | Arthropoda | 277. |
| 239944 | *Bathypallenopsis mollissima* | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Arthropoda | 278.274. |
| 134659 | *Colossendeis angusta* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Arthropoda | 279.280. |
| 107175 | *Munidopsis curvirostra* | 2 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | Arthropoda | 281. |
| 107206 | *Neolithodes grimaldii* | 4 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | Arthropoda | 282. |
| 134694 | *Nymphon leptocheles* | 1 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Arthropoda | 278.274. |
| 150523 | *Nymphon macrum* | 1 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Arthropoda | 278.274. |
| 134712 | *Nymphon tenellum* | 1 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Arthropoda | 278.274. |
| 382979 | *Pentacheles laevis* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | Arthropoda | 281. |
| 107563 | *Pontophilus norvegicus* | 2 | 2 | 1 | 1 | 3 | 1 | 3 | 2 | Arthropoda | 281.283. |
| 107565 | *Sabinea hystrix* | 2 | 2 | 1 | 1 | 3 | 1 | 3 | 2 | Arthropoda | 281. |
| 107699 | *Stereomastis nana* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | Arthropoda | 281. |
| 107700 | *Stereomastis sculpta* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 1 | Arthropoda | 281. |
| 104056 | *Terebratulina septentrionalis* | 2 | 3 | 4 | 4 | 3 | 4 | 4 | 4 | Brachiopoda | 284.285.274. |
| 111373 | *Sarsiflustra abyssicola* | 2 | 3 | 4 | 4 | 3 | 1 | 4 | 4 | Bryozoa | 286.274. |
| 103434 | Aplousobranchia | 2 | 1 | 4 | 4 | 3 | 4 | 3 | 4 | Chordata | 274. |
| 103483 | *Ascidia* | 2 | 1 | 4 | 4 | 3 | 1 | 3 | 4 | Chordata | 287.274. |
| 103439 | Didemnidae | 2 | 1 | 4 | 4 | 3 | 4 | 3 | 4 | Chordata | 274. |
| 125371 | *Acanella arbuscula* | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | Cnidaria | 288.289. |
| 158210 | *Actinauge cristata* | 2 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | Cnidaria | 290. |
| 100750 | *Actinauge* | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | Cnidaria | 290.291. |
| 100836 | *Actinoscyphia saginata* | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | Cnidaria | 290.292. |
| 100655 | Actinostolidae | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | Cnidaria | 290.291. |
| 744828 | *Aglaophenopsis cornuta* | 3 | 1 | 4 | 4 | 3 | 1 | 3 | 3 | Cnidaria | 293.294. |
| 1365 | Alcyonacea | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | Cnidaria | 274. |
| 125285 | *Anthomastus* | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | Cnidaria | 295.296. |
| 128504 | *Anthoptilum grandiflorum* | 4 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria | 297. |
| 128509 | *Balticina finmarchica* | 4 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria | 297.298. |
| 100817 | *Bolocera tuediae* | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | Cnidaria | 278.299. |
| 117294 | *Cladocarpus integer* | 4 | 1 | 4 | 4 | 4 | 1 | 3 | 3 | Cnidaria | 293.294. |
| 125270 | Clavulariidae | 1 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | Cnidaria | 300. |
| 517875 | *Drifa flavescens* | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | Cnidaria | 301.302. |
| 146943 | *Duva florida* | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | Cnidaria | 301.303. |
| 100730 | *Edwardsia* | 2 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | Cnidaria | 290.291. |
| 117093 | *Eudendrium* | 3 | 1 | 4 | 4 | 3 | 1 | 3 | 3 | Cnidaria | 294.304. |
| 135194 | *Flabellum (Ulocyathus) alabastrum* | 2 | 3 | 2 | 1 | 3 | 4 | 4 | 2 | Cnidaria | 305.306. |
| 128506 | *Funiculina quadrangularis* | 4 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria | 307. |
| 724723 | *Heteropolypus sol* | 2 | 3 | 4 | 4 | 3 | 3 | 3 | 3 | Cnidaria | 295.296. |
| 128512 | *Kophobelemnon stelliferum* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | Cnidaria | 308. |
| 117970 | *Modeeria rotunda* | 2 | 1 | 4 | 4 | 3 | 1 | 3 | 3 | Cnidaria | 294.304. |
| 128515 | *Pennatula aculeata* | 3 | 3 | 4 | 3 | 1 | 1 | 3 | 3 | Cnidaria | 297. |
| 100762 | *Phelliactis* | 3 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | Cnidaria | 290.291. |
| 128525 | *Protoptilum carpenterii* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | Cnidaria |  |
| 128516 | *Ptilella grandis* | 4 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria | 297. |
| 125357 | *Radicipes gracilis* | 3 | 4 | 4 | 4 | 3 | 1 | 3 | 4 | Cnidaria | 309. |
| 100777 | *Sagartiogeton* | 2 | 4 | 4 | 3 | 3 | 3 | 3 | 2 | Cnidaria | 290.291. |
| 291111 | *Stauropathes arctica* | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | Cnidaria | 289. |
| 117727 | *Ptychogena crocea* | 3 | 1 | 4 | 4 | 3 | 1 | 3 | 3 | Cnidaria | 294.304. |
| 117235 | *Symplectoscyphus* | 2 | 1 | 4 | 4 | 3 | 1 | 3 | 3 | Cnidaria | 294.304. |
| 128531 | *Umbellula lindahli* | 3 | 3 | 4 | 3 | 3 | 1 | 3 | 3 | Cnidaria | 310. |
| 128539 | *Virgularia mirabilis* | 4 | 3 | 4 | 3 | 4 | 1 | 3 | 3 | Cnidaria |  |
| 123881 | *Bathybiaster vexillifer* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Echinodermata | 311.312.313. |
| 124404 | *Brisaster fragilis* | 2 | 2 | 3 | 1 | 1 | 1 | 4 | 3 | Echinodermata | 314.315. |
| 124783 | *Hedingia albicans* | 3 | 4 | 3 | 1 | 1 | 1 | 3 | 3 | Echinodermata | 316.317. |
| 124971 | *Gorgonocephalus lamarckii* | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | Echinodermata | 314.318. |
| 124043 | *Hippasteria phrygiana* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Echinodermata | 311.319.320. |
| 124045 | *Mediaster bairdi* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Echinodermata | 311.320. |
| 124989 | *Ophiacantha fraterna* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | Echinodermata | 314.321. |
| 125016 | *Ophiochondrus armatus* | 2 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | Echinodermata | 314. |
| 245559 | *Ophiomusa lymani* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | Echinodermata | 314.322.323.324. |
| 322556 | *Ophioplinthus tessellata* | 2 | 3 | 2 | 1 | 3 | 1 | 3 | 3 | Echinodermata | 325. |
| 124343 | *Phormosoma placenta* | 3 | 3 | 2 | 1 | 3 | 1 | 4 | 3 | Echinodermata | 274.326. |
| 123851 | *Pontaster tenuispinus* | 3 | 2 | 2 | 1 | 3 | 1 | 3 | 3 | Echinodermata | 311.327. |
| 178133 | *Pseudarchaster gracilis* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Echinodermata | 311. |
| 124085 | *Pseudarchaster parelii* | 2 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Echinodermata | 311.328. |
| 123908 | *Psilaster andromeda* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Echinodermata | 311.329. |
| 123826 | *Zoroaster fulgens* | 3 | 3 | 2 | 1 | 3 | 1 | 3 | 2 | Echinodermata | 311.320. |
| 137631 | *Aeolidiella* | 1 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Mollusca | 274.330.331. |
| 531617 | *Arrhoges occidentalis* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 3 | Mollusca | 332.333. |
| 138823 | *Astarte montagui* | 1 | 2 | 4 | 4 | 3 | 4 | 1 | 4 | Mollusca | 274.334.335.336. |
| 138824 | *Astarte sulcata* | 2 | 2 | 4 | 4 | 3 | 4 | 1 | 4 | Mollusca | 274.278.335.336. |
| 138855 | *Beringius turtoni* | 3 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | Mollusca | 337.338.339. |
| 138866 | *Buccinum hydrophanum* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | Mollusca | 332.337.340 |
| 138902 | *Colus islandicus* | 3 | 3 | 2 | 1 | 3 | 1 | 1 | 1 | Mollusca | 278.337.341. |
| 160215 | *Colus stimpsoni* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | Mollusca | 278.333. |
| 140082 | *Hanleya hanleyi* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | Mollusca | 274.342.343.344. |
| 504627 | *Limopsis affinis* | 1 | 2 | 4 | 4 | 3 | 4 | 1 | 4 | Mollusca | 345.346.347. |
| 138923 | *Neptunea despecta* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | Mollusca | 332.341. |
| 2094 | Solenogastres | 2 | 1 | 2 | 1 | 3 | 1 | 3 | 2 | Mollusca | 274. |
| 138933 | *Turrisipho lachesis* | 2 | 3 | 2 | 1 | 3 | 1 | 1 | 2 | Mollusca | 274.332. |
| 172017 | *Asconema foliatum* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | Porifera | 274.348.349.350. |
| 132093 | *Craniella* | 2 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | Porifera | 274.348.349.350.351. |
| 131936 | *Crella* | 2 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | Porifera | 274.348.349.350.352. |
| 134023 | *Geodia barretti* | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | Porifera | 274.348.349.350.351.353. |
| 134033 | *Geodia macandrewii* | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | Porifera | 274.348.349.350.351.353. |
| 131598 | Haplosclerida | 2 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | Porifera | 274. |
| 168640 | *Mycale (Mycale) lingua* | 3 | 4 | 4 | 4 | 4 | 3 | 3 | 4 | Porifera | 274.348.349.350.354. |
| 131612 | Myxillina | 2 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | Porifera | 274. |
| 133980 | *Stelletta normani* | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | Porifera | 274.348.349.350.351.353. |
| 133988 | *Stryphnus fortis* | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | Porifera | 274.348.349.350.351.353 |
| 132019 | *Thenea* | 2 | 4 | 4 | 4 | 3 | 4 | 3 | 4 | Porifera | 274.348.349.350.351.353. |
| 152283 | Sipunculida | 3 | 1 | 3 | 1 | 1 | 1 | 3 | 2 | Sipunculida | 274. |

**Supplementary References.** Literature consulted for the traits of case study A1, A2, B, C and E.

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