**Supplementary Table 1** – Taxa of the Tulip Beds with their respective abundance, ecological modes (tieirng level, motility and feeding mode), and phyla (or other higher taxonomic grouping). # = Number of individuals. (1) = Number based on occurrence per discrete layer on slab, (2) = Number based on half the number of claws, (3) = Isolated spicules were excluded, (4) = Number based on number of pygida, (5) = Excluding isolated sclerites.

| Taxa | # | Tiering | Mobility | Feeding | Phylum |
| --- | --- | --- | --- | --- | --- |
| *Acrothyra gregaria* | 11 | epibenthic | sessile | suspension | Brachiopoda |
| aff. *Plenocaris* aff. *plena* | 1 | nektobenthic | mobile | deposit | Arthropoda |
| *Alalcomenaeus* sp. | 4 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Alokistocare* n. sp. | 1 | epibenthic | mobile | deposit | Arthropoda |
| *Amplectobelua stephenensis* (2) | 5 | nektonic | mobile | carnivorous | Arthropoda |
| *Anomalocaris canadensis* (2) | 270 | nektonic | mobile | carnivorous | Arthropoda |
| *Bosworthia simulans* (1) | 4 | epibenthic | sessile | primary producer | Algae/Cyanobacteria |
| *Branchiocaris* sp. | 30 | nektobenthic | mobile | deposit | Arthropoda |
| *Burgessochaeta* sp. | 1 | epibenthic | mobile | deposit | Annelida |
| *Byronia annulata* | 4 | epibenthic | sessile | carnivorous | Cnidaria |
| *Cambrorhytium* spp. | 81 | epibenthic | sessile | carnivorous | Cnidaria |
| *Canadaspis* sp. | 81 | nektobenthic | mobile | deposit | Arthropoda |
| *Caryosyntrips serratus* (2) | 5 | nektonic | mobile | carnivorous | Arthropoda |
| cf. *Anoria* sp. | 1 | epibenthic | mobile | deposit | Arthropoda |
| cf. *Branchiocaris* sp. | 1 | nektobenthic | mobile | deposit | Arthropoda |
| *Chancelloria* sp. | 2 | epibenthic | sessile | suspension | Unknown |
| *Choia carteri* | 162 | epibenthic | sessile | suspension | Porifera |
| *Crumillospongia* sp. | 5 | epibenthic | sessile | suspension | Porifera |
| *Ctenorhabdotus capulus* | 3 | nektonic | mobile | unknown | Ctenophora |
| *Diagoniella cyathiformis* (3) | 15 | epibenthic | sessile | suspension | Porifera |
| *Dictyonina* sp. | 12 | epibenthic | sessile | suspension | Brachiopoda |
| *Dinomischus isolatus* | 6 | epibenthic | sessile | suspension | Unknown |
| *Diraphora bellicostata* | 17 | epibenthic | sessile | suspension | Brachiopoda |
| *Ehmaniella* sp. | 5 | epibenthic | mobile | deposit | Arthropoda |
| *Eiffelia globosa* | 12 | epibenthic | sessile | suspension | Porifera |
| *Elrathina* sp. | 33 | epibenthic | mobile | deposit | Arthropoda |
| *Falospongia ramosa* | 1 | epibenthic | sessile | suspension | Porifera |
| *Glossopleura* sp. | 3 | epibenthic | mobile | deposit | Arthropoda |
| *Habelia*? *brevicauda* | 37 | epibenthic | mobile | deposit | Arthropoda |
| *Halichondrites* sp. | 8 | epibenthic | sessile | suspension | Porifera |
| *Hallucigenia* spp. | 119 | epibenthic | mobile | carnivorous | Lobopodia |
| *Hamptonia* sp. | 90 | epibenthic | sessile | suspension | Porifera |
| *Hanburia gloriosa* (4) | 5 | epibenthic | mobile | unknown | Arthropoda |
| *Hazelia* sp. | 65 | epibenthic | mobile | suspension | Porifera |
| *Helmetia expansa* | 1 | nektobenthic | mobile | suspension | Arthropoda |
| *Hintzespongia* sp. | 1 | epibenthic | sessile | suspension | Porifera |
| *Hurdia* sp. (2) | 41 | nektonic | mobile | carnivorous | Arthropoda |
| Indet Agnostid | 186 | epibenthic | mobile | deposit | Arthropoda |
| *Isoxys* sp. | 14 | nektonic | mobile | carnivorous | Arthropoda |
| *Kootenia* sp. (4) | 13 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Laenigma* aff. s*triatum* (1) | 156 | planktonic | sessile | primary producer | Algae/Cyanobacteria |
| *Laggania cambria* (2) | 22 | nektonic | mobile | carnivorous | Arthropoda |
| *Leanchoilia* spp. | 53 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Leanchoilia*? cf. *protagonia* | 3 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Leptomitella incepta* | 8 | epibenthic | sessile | suspension | Porifera |
| *Leptomitus* sp. | 56 | epibenthic | sessile | suspension | Porifera |
| *Lingulella waptaensis* | 9 | epibenthic | sessile | suspension | Brachiopoda |
| *Mackenzia costalis* | 11 | epibenthic | sessile | suspension | Cnidaria |
| *Margaretia dorus* | 1 | epibenthic | sessile | primary producer | Algae/Cyanobacteria |
| *Marpolia spissa* (1) | 693 | planktonic | sessile | primary producer | Algae/Cyanobacteria |
| *Marrella splendens* | 23 | nektobenthic | mobile | deposit | Arthropoda |
| *Micromitra burgessensis* | 16 | epibenthic | sessile | suspension | Brachiopoda |
| *Molaria* sp. | 4 | epibenthic | mobile | deposit | Arthropoda |
| *Mollisonia* sp. | 1 | nektobenthic | mobile | unknown | Arthropoda |
| *Naraoia* sp. | 35 | epibenthic | mobile | carnivorous | Arthropoda |
| *Nereocaris excilis* | 3 | nektonic | mobile | carnivorous | Arthropoda |
| *Nisusia burgessensis* | 23 | epibenthic | sessile | suspension | Brachiopoda |
| *Odaraia alata* | 1 | nektonic | mobile | carnivorous | Arthropoda |
| *Odontogriphus omalus* | 1 | epibenthic | mobile | herbivorous | Mollusca |
| *Ogygopsis klotzi* (4) | 9 | epibenthic | mobile | deposit | Arthropoda |
| *Oikozetetes seilacheri* | 1 | epibenthic | mobile | herbivorous | Mollusca |
| *Olenoides serratus* (4) | 47 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Oryctocara geikiei* | 1 | nektobenthic | mobile | deposit | Arthropoda |
| *Oryctocephalus* sp. (4) | 75 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Ottoia prolifica* | 68 | endobenthic | mobile | carnivorous | Priapulida |
| *Paterina zenobia* | 33 | epibenthic | sessile | suspension | Brachiopoda |
| *Perspicaris* spp. | 40 | nektonic | mobile | carnivorous | Arthropoda |
| *Petaloptyon danei* | 8 | epibenthic | sessile | suspension | Porifera |
| *Pirania muricata* | 27 | epibenthic | sessile | suspension | Porifera |
| *Poliella prima* | 1 | epibenthic | mobile | deposit | Arthropoda |
| *Polyplearaspis* sp. | 1 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Protoprisma annulata* | 4 | epibenthic | sessile | suspension | Porifera |
| *Protospongia hicksi* (3) | 13 | epibenthic | sessile | suspension | Porifera |
| *Sanshapentella*? sp. | 1 | epibenthic | sessile | suspension | Porifera |
| *Scenella amii* | 7 | epibenthic | mobile | herbivorous | Mollusca |
| *Selkirkia columbia* | 10 | endobenthic | mobile | carnivorous | Priapulida |
| *Sidneyia* sp. | 19 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Siphusauctum gregarium* | 1525 | epibenthic | sessile | suspension | Unknown |
| *Takakkawia lineata* | 8 | epibenthic | sessile | suspension | Porifera |
| *Tubulella flagellum* (1) | 299 | epibenthic | sessile | suspension | Cnidaria |
| *Tuzoia burgessensis* | 7 | nektonic | mobile | unknown | Arthropoda |
| Undet Algae TB-A (1) | 32 | planktonic | sessile | primary producer | Algae/Cyanobacteria |
| Undet Algae TB-B (1) | 28 | epibenthic | sessile | primary producer | Algae/Cyanobacteria |
| Undet Cyanobacteria TB-A (1) | 17 | epibenthic | sessile | primary producer | Algae/Cyanobacteria |
| Undet Cyanobacteria TB-B (1) | 5 | planktonic | sessile | primary producer | Algae/Cyanobacteria |
| Undet Dinocarid TB-A (2) | 1 | epibenthic | mobile | carnivorous | Arthropoda |
| Undet Eocrinoid TB-A | 30 | epibenthic | sessile | suspension | Echinodermata |
| Undet Lobopodian TB-A | 36 | epibenthic | mobile | carnivorous | Lobopodia |
| Undet Lobopodian TB-B | 4 | epibenthic | mobile | carnivorous | Lobopodia |
| Undet Porifera TB-A | 1 | epibenthic | sessile | suspension | Porifera |
| Undet Porifera TB-B | 163 | epibenthic | sessile | suspension | Porifera |
| Undet Priapulid TB-A | 5 | endobenthic | mobile | carnivorous | Priapulida |
| Undet Taxon A | 308 | unknown | unknown | unknown | Unknown |
| Undet Taxon TB-A | 1740 | unknown | unknown | unknown | Unknown |
| Undet Taxon TB-B | 170 | unknown | unknown | unknown | Unknown |
| Undet Taxon TB-C | 56 | unknown | unknown | unknown | Unknown |
| Undet Taxon TB-D | 24 | unknown | unknown | unknown | Unknown |
| Undet Taxon TB-E | 38 | unknown | unknown | unknown | Unknown |
| Undet Taxon TB-F (1) | 63 | epibenthic | sessile | primary producer | Algae/Cyanobacteria |
| Undet Taxon TB-G | 3 | epibenthic | sessile | suspension | Unknown |
| Undet Taxon TB-H | 8 | epibenthic | sessile | unknown | Cnidaria |
| Undet Worm TB-A | 129 | endobenthic | mobile | carnivorous | Priapulida |
| *Vauxia* sp. | 57 | epibenthic | sessile | suspension | Porifera |
| *Wahpia insolens* (1) | 96 | epibenthic | sessile | primary producer | Algae/Cyanobacteria |
| *Wapkia* sp. | 196 | epibenthic | sessile | suspension | Porifera |
| *Waptia* sp. | 2 | nektobenthic | mobile | deposit | Arthropoda |
| *Wiwaxia* sp. (5) | 11 | epibenthic | mobile | herbivorous | Mollusca |
| *Yohoia*? sp. | 3 | nektobenthic | mobile | carnivorous | Arthropoda |
| *Yuknessia*? sp. (1) | 7 | epibenthic | sessile | primary producer | Algae/Cyanobacteria |
| *Zacanthoides romingeri* | 1 | epibenthic | mobile | carnivorous | Arthropoda |
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