# Supplementary Table 3: Core sediment description

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| **Core** | **Sediments** |
| Windmill Lake | The core is 460cm long and the samples utilised for this work span 320-445cm below sediment surface. The core base consists of pebbles, silt and sand, followed above ca. 440cm, by silty sediments. From 405cm upwards the sediments become increasingly organic and from 290 cm upwards the sediments consist of gyttja. At 173cm the Jarvis Creek Ash can be identified as a 1mm-thick layer. |
| Jan Lake | The core is 364cm long and the samples utilised for this work span 151-348cm below sediment surface. Sediment in the lowest part of the core (363 to 249cm) is dense, dry silt. Above a core break between 249-233cm, the sediments are dark brownish black silty gyttja with laminations present throughout this part of the record. Two tephras at 138 and 149cm are thought to correlate with the Jarvis Ash. Organic matter (loss-on-ignition, LOI) is <10% until it rises above 10% from 300cm and >25% above 233 cm depth. |
| Ruppert Lake | The core is 396cm long and the samples utilised for this work span 0-387cm below sediment surface. The sediments in the lowest part of the core (353 to 396cm) consist of intermittent silty, sandy and coarse sandy layers. From 353 cm upwards the sediments become increasingly organic (LOI increase from 15% to 35%). This highly organic sediment contains ~60 bands of silty clay varying in thickness between 1 and 10mm thick throughout the upper 300cm of the core and a layer of moss remains at 165 cm depth. |
| Woody Bottom Pond | The core is 205cm long and the samples utilised for this work span 0-200cm below sediment surface. It consists mainly of gyttja (LOI between 50-80%). The lowest part of the core (175 to 205 cm) and the top part of the core (0 to 50 cm) contain a greater minerogenic component (LOI values are relatively low, <60%, and Ti and Fe values from XRF analysis are high, compared with the middle part of the record (M. van Hardenbroek, unpublished data)). There is a distinct layer of moss remains at 188 cm depth. |