**Supplementary Table 1** List of 62 papers used by Lacourse and Gajewski (2020) to assess current practices in building and reporting age-depth models. \* = paper with more than one age-depth model

| Author | Year | Title | Journal | Volume,  Page numbers |
| --- | --- | --- | --- | --- |
| Alivernini et al. | 2018 | Ostracod-based reconstruction of Late Quaternary lake level changes within the Tangra Yumco lake system (southern Tibetan Plateau) | Journal of Quaternary Science | 33, 713–720 |
| Alt et al. | 2018 | Millennial scale climate-fire-vegetation interactions in a mid-elevation mixed coniferous forest, Mission Range, northwestern Montana, USA | Quaternary Research | 90, 66–82 |
| Anderson et al. | 2018 | Southern Hemisphere westerly wind influence on southern New Zealand hydrology during the Lateglacial and Holocene | Journal of Quaternary Science | 33, 689–701 |
| Anderson et al. \* | 2019 | Postglacial vegetation community change over an elevational gradient on the western Kenai Peninsula, Alaska: pollen records from Sunken Island and Choquette Lakes | Journal of Quaternary Science | 34, 309–322 |
| Andrews et al. \* | 2018 | Sea ice, ice-rafting, and ocean climate across Denmark Strait during rapid deglaciation (~16–12 cal ka BP) of the Iceland and East Greenland shelves | Journal of Quaternary Science | 33, 112–130 |
| Behling and Oliveira | 2018 | Evidence of a late glacial warming event and early Holocene cooling in the southern Brazilian coastal highlands cooling in the southern Brazilian coastal highlands | Quaternary Research | 89, 90–102 |
| Behrens et al. | 2019 | Meltwater discharge during the Holocene from the Wilkes subglacial basin revealed by beryllium isotope analysis of marine sediments | Journal of Quaternary Science | 34, 603–608 |
| Benes et al. | 2019 | Postglacial vegetation dynamics at high elevation from Fairy Lake in the northern Greater Yellowstone Ecosystem, Montana, USA | Quaternary Research | 92, 365–380 |
| Benson et al. \* | 2019 | A 16,000-yr-long sedimentary sequence from Lakes Peters and Schrader (Neruokpuk Lakes), northeastern Brooks Range, Alaska | Quaternary Research | 92, 609–625 |
| Berg et al. | 2019 | Holocene glacier fluctuations and environmental changes in subantarctic South Georgia inferred from a sediment record from a coastal inlet | Quaternary Research | 91, 132–148 |
| Bobek et al. | 2018 | Biotic controls on Holocene fire frequency in a temperate mountain forest, Czech Republic | Journal of Quaternary Science | 33, 892–904 |
| Brown et al. | 2018 | Lateglacial/early Holocene palaeoenvironments in the southern North Sea Basin: new data from the Dudgeon offshore wind farm | Journal of Quaternary Science | 33, 597–610 |
| Cadd et al. | 2019 | The influence of fine‐scale topography on the impacts of Holocene fire in a Tasmanian montane landscape | Journal of Quaternary Science | 34, 491–498 |
| Constantine et al. | 2019 | Mid- to late Holocene cooling events in the Korean Peninsula and their possible impact on ancient societies | Quaternary Research | 92, 98–108 |
| Cordova and Johnson | 2019 | An 18 ka to present pollen- and phytolith-based vegetation reconstruction from Hall’s Cave, south-central Texas, USA | Quaternary Research | 92, 497–518 |
| Egan et al. | 2019 | Diatom-inferred aquatic impacts of the mid-Holocene eruption of Mount Mazama, Oregon, USA | Quaternary Research | 91, 163–178 |
| Frodlová et al. \* | 2018 | Effect of sample size and resolution on palaeomalacological interpretation: a case study from Holocene calcareous-fen deposits | Journal of Quaternary Science | 33, 68–78 |
| Gavin et al. \* | 2018 | Millennial-scale decline in coho salmon abundance since the middle Holocene in a coastal Oregon watershed, USA | Quaternary Research | 89, 432–445 |
| Haberyan | 2018 | A >22,000 yr diatom record from the plateau of Zambia | Quaternary Research | 89, 33–42 |
| Hixon et al. | 2018 | Nitrogen isotope (δ15N) patterns for amino acids in lemur bones are inconsistent with aridity driving megafaunal extinction in south-western Madagascar | Journal of Quaternary Science | 33, 958–968 |
| Ivanova et al. \* | 2019 | Postglacial paleoceanography and paleoenvironments in the northwestern Barents Sea | Quaternary Research | 92, 430–449 |
| Ivory and Russell \* | 2018 | Lowland forest collapse and early human impacts at the end of the African Humid Period at Lake Edward, equatorial East Africa | Quaternary Research | 89, 7–20 |
| Juřičková et al. \* | 2019 | A glacial refugium and zoogeographic boundary in the Slovak eastern Carpathians | Quaternary Research | 91, 383–398 |
| Kelly et al. | 2018 | Continuous human presence without extensive reductions in forest cover over the past 2500 years in an aseasonal Amazonian rainforest | Journal of Quaternary Science | 33, 369–379 |
| Kirby et al. | 2018 | A late Wisconsin (32–10k cal a BP) history of pluvials, droughts and vegetation in the Pacific south-west United States (Lake Elsinore, CA) | Journal of Quaternary Science | 33, 238–254 |
| Kock et al. | 2019 | Late Holocene environmental changes reconstructed from stable isotope and geochemical records from a cushion-plant peatland in the Chilean Central Andes (27°S) | Journal of Quaternary Science | 34, 153–164 |
| Krause et al. | 2019 | Late Quaternary vegetation, climate, and fire history of the Southeast Atlantic Coastal Plain based on a 30,000-yr multi-proxy record from White Pond, South Carolina, USA | Quaternary Research | 91, 861–880 |
| Krylovich et al. | 2019 | Hunter-gatherers subsistence and impact on fauna in the Islands of Four Mountains, Eastern Aleutians, Alaska, over 3000 yr | Quaternary Research | 91, 983–1002 |
| Kuzmicheva et al. | 2019 | A 7300-yr-old environmental history of seabird, human, and volcano impacts on Carlisle Island (the Islands of Four Mountains, eastern Aleutians, Alaska) | Quaternary Research | 91, 934–952 |
| Lacourse et al. | 2019 | Postglacial wetland succession, carbon accumulation, and forest dynamics on the east coast of Vancouver Island, British Columbia, Canada | Quaternary Research | 92, 232–245 |
| Leithold et al. | 2018 | Slope failures within and upstream of Lake Quinault, Washington, as uneven responses to Holocene earthquakes along the Cascadia subduction zone | Quaternary Research | 89, 178–200 |
| Liu et al. | 2019 | Ecology and paleoenvironmental application of testate amoebae in peatlands of the high-elevation Colombian páramo | Quaternary Research | 92, 14–32 |
| Liu et al. | 2019 | Late onset of the Holocene rainfall maximum in northeastern China inferred from a pollen record from the sediments of Tianchi Crater Lake | Quaternary Research | 92, 133–145 |
| Long et al. | 2019 | A 7600 yr vegetation and fire history from Anthony Lake, northeastern Oregon, USA, with linkages to modern synoptic climate patterns | Quaternary Research | 91, 705–713 |
| Luo et al. | 2019 | Environmental changes in the north-east Sunda region over the last 40 000 years | Journal of Quaternary Science | 34, 245–257 |
| McCulloch et al. | 2019 | Late glacial and Holocene landscape change and rapid climate and coastal impacts in the Canal Beagle, southernmost Patagonia | Journal of Quaternary Science | 34, 674–684 |
| Menke et al. | 2018 | Cryptotephra from Lipari Volcano in the eastern Gulf of Taranto (Italy) as a time marker for paleoclimatic studies | Quaternary Research | 89, 520–532 |
| Mueller et al. \* | 2019 | Climate and human influence on late Holocene fire regimes in the British Virgin Islands | Quaternary Research | 91, 679–690 |
| Nash et al. \* | 2018 | Episodic deposition of Illinois Valley Peoria silt in association with Lake Michigan Lobe fluctuations during the last glacial maximum | Quaternary Research | 89, 739–755 |
| Novenko et al. | 2018 | Forest history, peatland development and mid- to late Holocene environmental change in the southern taiga forest of central European Russia | Quaternary Research | 89, 223–236 |
| Nunnery et al. | 2019 | Lake-level variability in Salar de Coipasa, Bolivia during the past ~40,000 yr | Quaternary Research | 91, 881–891 |
| Pompeani et al. | 2019 | The environmental impact of a pre-Columbian city based on geochemical insights from lake sediment cores recovered near Cahokia | Quaternary Research | 91, 714–728 |
| Quick et al. | 2018 | A high-resolution record of Holocene climate and vegetation dynamics from the southern Cape coast of South Africa: pollen and microcharcoal evidence from Eilandvlei | Journal of Quaternary Science | 33, 487–500 |
| Raczka et al. \* | 2018 | The collapse of megafaunal populations in southeastern Brazil | Quaternary Research | 89, 103–118 |
| Raja et al. | 2019 | Tropical rainforest dynamics and palaeoclimate implications since the late Pleistocene, Nilgiris, India | Quaternary Research | 91, 367–382 |
| Rodríguez-Zorro et al. | 2018 | Forest stability during the early and late Holocene in the igapó floodplains of the Rio Negro, northwestern Brazil | Quaternary Research | 89, 75–89 |
| Scaife et al. | 2019 | The Falkland Islands’ palaeoecological response to millennial‐scale climate perturbations during the Pleistocene–Holocene transition: Implications for future vegetation stability in the southern ocean islands | Journal of Quaternary Science | 34, 609–620 |
| Schiferl et al. | 2018 | Vegetation responses to late Holocene climate changes in an Andean forest | Quaternary Research | 89, 60–74 |
| Stager et al. | 2018 | On the age and origin of Lake Ejagham, Cameroon, and its endemic fishes | Quaternary Research | 89, 21–32 |
| Taylor et al. | 2018 | Mid-Holocene Iberian hydroclimate variability and paleoenvironmental change: molecular and isotopic insights from Praia Rei Cortiço, Portugal | Journal of Quaternary Science | 33, 79–92 |
| Theissen et al. | 2019 | A record of mid- and late Holocene paleohydroclimate from Lower Pahranagat Lake, southern Great Basin | Quaternary Research | 92, 352–364 |
| Tiner et al. | 2018 | Geophysical and geochemical constraints on the age and paleoclimate implications of Holocene lacustrine cores from the Andes of central Chile | Journal of Quaternary Science | 33, 150–165 |
| van Bellen et al. | 2018 | Exploring pathways to late Holocene increased surface wetness in subarctic peatlands of eastern Canada | Quaternary Research | 90, 83–95 |
| Vasskog et al. \* | 2019 | Evidence of early deglaciation (18 000 cal a BP) and a postglacial relative sea‐level curve from southern Karmøy, south‐west Norway | Journal of Quaternary Science | 34, 410–423 |
| Wang et al. | 2019 | Holocene evolution of the Indian Summer Monsoon inferred from a lacustrine record of Lake Wuxu, south‐east Tibetan Plateau | Journal of Quaternary Science | 34, 463–474 |
| Wang et al. | 2019 | Strata sequence and paleochannel response to tectonic, sea-level, and Asian monsoon variability since the late Pleistocene in the South Yellow Sea | Quaternary Research | 92, 450–468 |
| Weller et al. | 2019 | New age controls on the tephrochronology of the southernmost Andean Southern Volcanic Zone, Chile | Quaternary Research | 91, 250–264 |
| Wilcox et al. | 2019 | A new set of basaltic tephras from southeast Alaska represent key stratigraphic markers for the late Pleistocene | Quaternary Research | 92, 246–256 |
| Zhang and Elias \* | 2019 | Holocene palaeoenvironmental reconstruction based on fossil beetle faunas from the Southern Altai region, north‐west China | Journal of Quaternary Science | 34, 593–602 |
| Zhang et al. | 2018 | Early–middle Holocene ecological change and its influence on human subsistence strategies in the Luoyang Basin, north-central China | Quaternary Research | 89, 446–458 |
| Zhang et al. | 2018 | Variations of the Indian summer monsoon over the last 30 000 years inferred from a pyrogenic carbon record from south-west China | Journal of Quaternary Science | 33, 131–138 |
| Zhou et al. | 2019 | Late Quaternary lake-level and climate changes in arid central Asia inferred from sediments of Ebinur Lake, Xinjiang, northwestern China | Quaternary Research | 92, 416–429 |