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1 **A meta-database of peatland palaeoecology in Great Britain**

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10 **ABSTRACT**

11 We present and appraise a large compilation of peatland palaeoecological research in Great Britain, and
12 discuss the value of these data for secondary analysis. We identify 475 radiocarbon-dated
13 palaeoecological records from British peatlands published since 1970. Peatland palaeoecological
14 research has been widespread but with some clear spatial biases reflecting factors such as accessibility
15 and the location and interests of active researchers. We show that basic details such as stratigraphic
16 descriptions, site coordinates and details of radiocarbon dates are omitted from publications with
17 surprising frequency and note the large quantity of data that only ever appears in PhD theses. To allow
18 papers to remain concise while presenting essential background information we propose a system of
19 standardised meta-data in online supplementary material. The extensive body of palaeoecological data
20 for British peatlands has been relatively unexploited. The compilation we present will be a valuable aid
21 in making better use of this data resource.

22 **KEYWORDS:** Database; Meta-database; Peat; Holocene; Carbon; Publishing

23 **Introduction**

24 Palaeoecology increasingly seeks to answer questions at larger spatial scales (Seddon et al., 2014) but
25 most Holocene palaeoecological studies report data for a single core from a single site. Key to answering
26 fundamental Holocene palaeoecological questions therefore are studies which bring together multiple
27 individual records. However, there have been surprisingly few attempts to compile the published data,
28 even for regions that have been intensively researched (Coles et al., 1998; Battarbee et al., 2011; Suggitt
29 et al., 2015). Such compilations have an important role as a source of data for secondary analysis, a
30 guide to the literature for future researchers and to highlight important trends and biases. Here we
31 consider the palaeoecology of peatlands in Great Britain.

32 Peatlands have been widely used as repositories for palaeoenvironmental information, having the
33 general advantages of:

- 34 1) Wide distribution.
- 35 2) Relatively easy coring with simple, manually-operated, equipment.
- 36 3) Good preservation of a wide range of micro- and macrofossils.
- 37 4) Relatively high accumulation rates, allowing studies to have good temporal resolution.
- 38 5) An organic medium that is easy to date by radiocarbon.
- 39 6) Minimal issues with post-depositional disturbance.

40 Peatland palaeoecology has a long history in Great Britain, dating back to pioneering researchers such as
41 Sir Harry Godwin in the early decades of the twentieth century (Godwin and Godwin, 1933; Godwin et
42 al., 1935). In more recent years British researchers have pioneered the use of peatland archives for
43 climate reconstruction (Chambers and Charman, 2004; Chambers et al., 2012). However, there has been
44 no systematic attempt to compile and synthesise the extensive literature. We believe that such a
45 synthesis is overdue and that the data contained in these studies is a valuable resource that is currently
46 under-exploited. Our goal here is to produce a new compilation of British peatland palaeoecology
47 studies, use this to explore the changing nature of the research undertaken and make recommendations
48 for the future.

49 Methods: Producing the compilation

50 1) Search approach

51 We used multiple data sources in producing this compilation:

52 First we exploited existing databases of palaeoecological studies. We found the most useful of these to
53 be the English Core Record Meta-database (Suggitt et al., 2015), the Scottish Palaeoecological Archive
54 Database (Coles et al., 1998) and the European Pollen Database (Fyfe et al., 2009). We inspected all
55 records within our search region and extracted and examined those where details recorded in the
56 database suggested studies that met our search criteria (see below). We also inspected publication lists
57 in studies that have compiled basal radiocarbon dates in the context of peat initiation (Tallis, 1991;
58 Tallis, 1998; Flitcroft, 2006; Gallego-Sala et al., 2015). Each of these data sources only provided a small
59 proportion of the total, clearly demonstrating the need for a more focussed compilation.

60 Secondly, we conducted literature searches using the databases Scopus and Google Scholar during the
61 period from October 2014 to November 2015. We used many combinations of search terms including
62 the following keywords: Britain, England, Scotland, Wales, United Kingdom, fen, bog, peat, peatland,
63 mire, Flandrian, Holocene, radiocarbon, palaeoecology, pollen, palynology, palaeo* and macrofossils.
64 We typically examined the top 500 returns sorted by relevance and inspected the abstract before
65 reading the paper in more detail if this suggested a study that met our search criteria. Our initial
66 searches revealed a large quantity of relevant material in PhD theses so we also conducted searches of
67 the UK's national thesis repository (ETHOS) using many of the same search terms. As several UK
68 universities do not subscribe to ETHOS we conducted further searches of institutional thesis repositories.

69 Our main interest is in radiocarbon dated sites (see below) so we also searched for studies by identifying
70 radiocarbon dates on peat. We examined radiocarbon date lists published in the journal Radiocarbon

71 for the most active UK-based radiocarbon laboratories (including Glasgow, Belfast, Oxford, Cambridge
72 and Birmingham). The main publicly-funded laboratory for the analysis of environmental samples in the
73 UK is the NERC Radiocarbon Laboratory (NERC-RCL), East Kilbride, so we paid particular attention to
74 identifying sites dated at this laboratory. We inspected the lists of older radiometrically-dated studies
75 published by Harkness and Wilson (1973), Harkness and Wilson (1974), Harkness and Wilson (1979) and
76 Harkness (1981) and data published in a CD accompanying Harkness et al. (1997). We also inspected the
77 compilation of radiometric dates produced from 1996-2005 (Garnett et al., 2010) available on the NERC-
78 RCL website (www.gla.ac.uk/centres/nercrcl/results.htm). Information for more recent AMS-dated sites
79 was provided directly by laboratory staff. For all of these sources we identified dates from British sites
80 where the dated material was peat, peat extracts (humins, humic acid) or peat components such as
81 *Sphagnum* macrofossils. We used either publication details associated with the record, or searched by
82 site and/or author name in an attempt to find full publications. We did not include some sites where we
83 located radiocarbon data but not palaeoecological data.

84 2) Inclusion criteria

85 We established a number of criteria for inclusion in our compilation.

86 Our first criterion was that the site can be legitimately considered a peatland. There is no universally
87 accepted definition of the terms 'peat' and 'peatland'. Most definitions of peatland take the form 'a site
88 with a surficial layer greater than Xcm depth with more than Y% organic material' but the actual values
89 of 'X' and 'Y' vary considerably (Charman, 2002) and even differ between the soil surveys of the different
90 nations of the UK (Chapman et al., 2009). In palaeoenvironmental studies the term 'peat' is occasionally
91 used rather loosely, and information presented in published studies often does not include the organic
92 content. We opted for a relatively conservative approach, excluding sites where the sediment was
93 described using terms such as 'silty peat' or 'peaty sediment', sites where mineral sediment overlies
94 peat, and sites with saline influence as these often have more complex stratigraphy.

95 Our second criterion was the adequacy of the chronology. We believe that palaeoecological records
96 without any form of external chronological control are much less likely to be of interest for future
97 comparison or re-analysis. The overwhelming majority of peatland palaeoecological studies have been
98 dated by radiocarbon so we focus on studies with one or more radiocarbon dates. Preparation, analysis
99 and interpretation methods for radiocarbon determinations have improved considerably since the
100 invention of the method in the 1940s (Libby, 1946; Bronk Ramsey, 2008) and early radiocarbon dates
101 should be treated with a degree of caution. We apply an arbitrary cut-off at 1970, that we suggest is a
102 reasonable estimate for a point in time by which radiocarbon analysis had become a routine method
103 and conventions for publication of radiocarbon data had become reasonably standardised (for instance,
104 consistent use of the Libby half-life). We excluded studies with radiocarbon dates solely on
105 archaeological materials, even where these were extracted from peat contexts, due to the additional
106 complexity this imposes. Similarly, we were cautious of radiocarbon dates on wood, particularly wood
107 macrofossils at the base of profiles as these may not be contemporaneous with surrounding peat. We
108 only included records where dates on wood formed part of a coherent sequence with dates on peat,
109 peat extracts or other plant macrofossils.

110 We confined our search to Great Britain and outlying islands, including the Isle of Man and Scottish
111 Islands. We did not include sites in Ireland. We assigned each record to a location based on either
112 published coordinates, or estimates of coordinates based on site location maps. In some instances we
113 found published coordinates to be erroneous and in these instances we endeavoured to correct them.

114 3) Caveats

115 Total comprehensiveness is an unrealistic goal for a compilation of this type. Other databases are known
116 to have gaps (e.g. Tooley, 2015) and this is very likely to be the case here. There is some material we
117 were unable to access and undoubtedly there are further publications not recovered by our search
118 criteria or overlooked in our searches. Most likely to be excluded are: i) Entirely unpublished records. ii)
119 Records only presented in PhD theses or contract reports. iii) Records associated with archaeological
120 studies, which are often harder to identify and locate. iv) Older material, which is less-likely to be
121 included in journal databases. v) Very recent material not yet included in databases, or in PhD theses,
122 which are not yet publicly accessible. vi) Sites where peat is incidental to the main focus of the study (for
123 instance longer cores where the focus of the authors was on periods prior to the Holocene).

124 However, we went to considerable effort to identify as much material as possible and believe that our
125 compilation does capture a substantial majority of all the work that has been undertaken. We welcome
126 suggestions from readers for additional material and will endeavour to update the database in the
127 future with both new publications and with material previously overlooked. Given the volume of
128 material considered we cannot guarantee that the dataset is entirely free of errors and inconsistencies
129 but aimed to minimise this by cross-checking between authors.

130 Results and Discussion

131 The state of the art

132 We identified 475 radiocarbon dated palaeoecological records from across Britain published since 1970
133 (Supplementary Material 1). The average duration of a record is around 4500 radiocarbon years and the
134 records represent a total of 2299 radiocarbon dates (Fig. 1). More than a dozen palaeoecological
135 methods have been applied with an average of 2.3 methods per study. Of these methods, pollen
136 analysis has been by far the most popular (80% of all records), followed by charcoal analysis (37%). Of
137 the methods used for reconstruction of peatland palaeo-wetness, alkali extraction humification analysis
138 (Chambers et al., 2011) has been the most widely applied (19%).

139 Records are widely dispersed across Britain; there are very few regions with peat left unstudied (Fig. 2).
140 The distribution of palaeoecological studies only loosely follows the distribution of peat. Similar
141 numbers of studies have been conducted in Scotland (44% records) and England (39% records) despite
142 Scottish peatland area being more than four times as great (Joint Nature Conservation Committee,
143 2011). The distribution map clearly highlights the contributions of individual researchers. The work of
144 Prof. Frank Chambers in south Wales, Prof. Keith Barber in the Scottish borders and Dr. Richard Tipping
145 in Glen Affric are particularly apparent when considering the distribution of studies (Glen Affric is a good
146 contender for the most intensively researched peatland area in Britain). The high density of studies in

147 the peatlands of Devon and Cornwall is clearly attributable to the long-history of palaeoecological
148 research at the Universities of Exeter and Plymouth.

149 Seemingly the most under-researched area of extensive peat is the Monadhliath Mountains of the
150 western Cairngorms (eastern Scotland). This is a relatively large area with extensive peatland but
151 appears to be entirely unstudied, most likely due to its remoteness. Another notably under-researched
152 peatland area is the Fenland region of eastern England. In this case the comparative lack of research is
153 attributable to the very degraded condition of these agriculturally-utilised peatlands.

154 The number of palaeoecological records is, of course, a poor proxy for the quality of palaeoecological
155 knowledge. For instance, our assessment is that the three most densely peat-covered regions of Britain
156 (the Flow Country, the Isle of Lewis and Shetland Mainland) are considerably under-researched despite
157 the reasonable number of core records identified in Fig. 2.

158 Temporal trends in research

159 In compiling the dataset we observed some notable temporal trends in the research undertaken (Fig. 3).
160 The first is simply a large increase in the number of core records produced over time, with more than
161 three times as many records published in the decade 2000-2010 as the decade 1970-1980. This result
162 may be somewhat exaggerated by the greater accessibility of more recent material but the underlying
163 trend is undoubtedly real, paralleling the increase in publication numbers observed across science
164 (Larsen and von Ins, 2010). Assessing the changing motivations for palaeoecological studies is inherently
165 difficult but it is clear that there has been a sharp decline in studies focused on patterns of vegetation
166 history since the 1980s and a greater diversity of motivations over the last two decades (Supplementary
167 Figure 1). There is a notable drop in the total number of records published since 2010, even when
168 accounting for the shorter time period covered. We suspect this might also be a real trend with perhaps
169 a sentiment that there are fewer 'big questions' remaining to be addressed in the Holocene of Great
170 Britain or, more prosaically, the increasing difficulty of securing funding.

171 As well as changes in the quantity of research conducted, there have also been changes in the nature of
172 palaeoecological studies. A clear trend over recent decades has been a shift towards multi-proxy
173 studies. Records from the 1970s and 1980s are predominantly based on a single proxy (mostly pollen)
174 but there has been increasing diversity since the 1990s. A particular example of this trend is the
175 increasing inclusion of non-pollen palynomorphs (NPPs) in palynological studies (Fig. 3c). Although the
176 majority of pollen studies still do not include NPPs there appears to have been a large jump this decade.

177 At the outset we expected that we would see a trend towards improved chronologies. However, while
178 the errors in individual radiocarbon dates have more than halved, the number of dates (per year or per
179 core) has remained broadly constant (Fig. 3). This is surprising as the real-terms cost of radiocarbon
180 analysis has reduced considerably over this period. Researchers have perhaps prioritised the analysis of
181 greater number of cores rather than increasing the number of dates per core.

182 In compiling the dataset we noted that a significant proportion of data only appears in student theses.
183 We made no comprehensive attempt to follow theses through to publication but estimate that 15-20%

184 of site records are only ever presented in this format. This is a considerable quantity of data and the real
185 figure may be higher as relevant theses were often hard to identify. The recent trend in UK academia
186 towards producing PhD theses in the form of a collection of papers may help reduce this proportion in
187 the future.

188 Publication standards and conventions.

189 The preparation of the database required us to inspect many hundreds of papers. During the course of
190 this exercise we have made various observations about publication standards and conventions, which
191 are worth disseminating. In making these observations we do not mean to preach, but simply to
192 highlight areas where small changes would be helpful to facilitate future studies. Although our data is
193 from British peatlands we believe that many of these observations would hold across Quaternary
194 palaeoecology more generally.

195 In producing the compilation we noted a clear trend for a reduction in the proportion of studies
196 publishing stratigraphic data (Fig. 4). Whereas stratigraphic diagrams or descriptions are almost
197 ubiquitous in publications from the 1970s and 1980s (>90%) they are now presented in less than two
198 thirds of publications. Partly this decline may be due to the increasing prevalence of macrofossil analysis
199 with a perception that macrofossil data renders more general stratigraphic description unnecessary.
200 However, even when only considering studies that did not present macrofossil data, the decline remains
201 stark (Fig. 4). In compiling this dataset we found stratigraphic information extremely helpful to
202 differentiate peat from non-peat, to identify the base of the peat profile and to understand variability in
203 peat composition and properties. We believe there is a strong case for stratigraphic data to be routinely
204 presented. Indeed, stratigraphy remains important even when macrofossil data is published as it
205 provides additional information, such as the presence of mineral layers or changes in colour or
206 decomposition of the peat, which may not be apparent from macrofossils alone.

207 We noted that the details of coring location provided in publications were often not sufficiently specific
208 to allow the coring site to be located with a high degree of precision. We calculate that 23% of studies
209 either did not present a grid reference for their coring location, this reference was obviously incorrect
210 (e.g. in the sea), or was less precise than the eight figure (two letters plus six numbers) Ordnance Survey
211 grid reference we consider minimally adequate (there was no clear temporal trend in this proportion
212 (Fig. 4)). Many of these studies did present sketch maps. However, we found that matching author's
213 sketch maps with published maps for the same regions was often difficult and generally introduced a
214 substantial degree of imprecision. Even a standard eight figure grid reference is insufficiently precise to
215 allow a coring spot to be accurately re-located on the ground in the future. Most researchers will now
216 have access to GPS technology when in the field and we recommend that coordinates are recorded and
217 published to the maximum degree of precision possible.

218 Conventions for the publication of radiocarbon data are well established, of which the most important
219 are the publication of laboratory codes and uncalibrated, as well as calibrated, dates (Stuiver and
220 Polach, 1977). While a majority of published studies abided by these conventions we located a non-
221 trivial number of studies (>5%) that failed to either present uncalibrated dates and/or did not include

222 laboratory codes. These conventions are important to allow dates to be traced and re-calibrated with
223 new calibration curves. Dates only published in calibrated form, only presented in terms of an age mid-
224 point, or only as a point on a graph are unlikely to be useful for future analysis. We stress the
225 importance of abiding by these conventions.

226 Finally we note that it is often difficult to judge the nature of a peatland site on the basis of published
227 information. To a large extent this is because there is no universally-accepted system for classifying
228 peatlands. One author's 'poor fen' may be another's 'valley bog', 'soligeneous mire' or 'peat-filled
229 basin'! As a universal system of classification is unlikely in the near future we advocate the publication of
230 as much supporting information as possible to allow readers to judge the site for themselves.
231 Particularly important in this respect is information on vegetation. The ideal would be for researchers to
232 survey vegetation using an accepted system, such as the UK National Vegetation Classification (Rodwell,
233 1991). Most researchers will have taken photographs of their sites in the field and these can be a useful
234 aid to the reader in understanding the nature of the site. Sketch maps and site profiles provide useful
235 further information and data on loss on ignition can be very useful to distinguish peat from other
236 sediments.

237 A proposal for future publications.

238 Since the 1970s palaeoecological papers have reduced in average length by almost 40% (Supplementary
239 Figure 2). This trend towards shorter papers probably reflects both a desire among authors to present
240 results concisely and increasingly stringent journal limits (Statzner and Resh, 2010), and may partly
241 explain why some information has been increasingly omitted. However, the advent of online
242 supplementary material in most journals means that there is now little barrier to the presentation of
243 supporting information: it is entirely possible to have *both* a concise, focussed, paper and
244 comprehensive presentation of the results. We propose that it would be useful for future authors to
245 make much more use of online supplementary material to present study meta-data. Doing so would
246 ensure that all essential information is presented in all studies, and would facilitate future compilations
247 of literature particularly if information is presented in a consistent format. We suggest that essential
248 information that should be presented in this way includes: the full location details, site description,
249 vegetation, core stratigraphy, dating points and a list of palaeoecological methods applied. In
250 Supplementary Material 2 we propose a pro-forma that could be used for this purpose and that we
251 intend to use in our future work. We advocate the inclusion of this form, or an equivalent, in the
252 supplementary material of future publications.

253 Value for secondary analysis.

254 We believe the compilation we assemble here will be of considerable value for secondary analysis. The
255 most obvious use of the data is focussed on the original questions of each study. For instance, a large
256 number of peatland studies have addressed vegetation history and could contribute to improving
257 models of changing Holocene vegetation. While the European Pollen Database includes some of these
258 sites, we identify many more that could potentially make a contribution. Many more recent studies
259 have focussed on climate change and the integration of such records could contribute to better

260 syntheses *cf.* (Charman et al., 2006). The charcoal records could contribute to understanding Holocene
261 fire frequency. Clearly considerable work might be required to digitise old data but we believe this
262 would be a worthwhile investment.

263 These datasets could also contribute in less obvious ways. Peatlands are valued for their role as a carbon
264 sink and peatland conservation and management is increasingly driven by the necessity to conserve
265 carbon stocks (Bain et al., 2011). The carbon stock of UK peatlands is quite poorly constrained; estimates
266 reviewed by Lindsay et al. (2010) vary more than fivefold and there are very few records of long-term
267 carbon accumulation (Anderson, 2002; Mauquoy et al., 2002; Turner et al., 2014). Previous
268 palaeoecological studies may provide data to help improve this picture; many give information on peat
269 composition and inorganic content, important terms in the carbon stock calculation. Radiocarbon
270 profiles may help constrain estimates of Holocene carbon flux. Finally, simply the peat depth
271 measurements may be of value to improving estimates of current carbon stock. Some of these
272 applications will be re-visited in subsequent publications.

273 The peatlands of Great Britain are undoubtedly some of the most researched anywhere. The vast body
274 of palaeoecological data brought together by this study is an enormous resource for future research.

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281 We welcome data contributions from readers. To make it easier to incorporate future additions and
282 keep the database up-to-date we would appreciate if wherever possible data contributors could format
283 their contributions to match those already listed.

284 Author contributions: RJP conceived the study, wrote the first draft of the manuscript and conducted
285 data compilation. JR conducted data compilation. RA contributed to planning the study and helped
286 supervise the work of JR. CEF contributed an earlier compilation of studies from Scotland. All authors
287 contributed to the manuscript.

288 Figures

289 Figure 1. a) Methods applied in the identified studies. The 'other methods' group includes a very broad
290 range of less popular methods such as magnetic susceptibility, x-radiography and coleopteran remains.
291 Studies were only counted as including NPPs where a broad suite of microfossils were identified (not
292 just *Sphagnum* spores for instance). b) Records by time period covered. Duration is calculated on a
293 simplistic basis as the time difference between the oldest date and year of publication (where sampling

294 was conducted through the entire peat column) or the oldest and youngest date (where sampling did
295 not continue to the surface). Radiocarbon ages are not calibrated.

296 Figure 2. Spatial distribution of peatland palaeoecological studies. Area shaded in brown is peatland
297 distribution based on British Geological Survey surficial geology mapping.

298 Figure 3. Temporal trends in published palaeoecological site records from Great Britain. a) Number of
299 studies over time; b) numbers of proxies employed by those studies; c) the proportion of pollen studies
300 including non-pollen palynomorphs; d) dates per core; e) years per date; f) the mean error of dates. Bars
301 for the decade from 2010 are shaded in white and comparisons to earlier decades should be made with
302 caution. The number of proxies in b is based on the same groups used in Fig. 1.

303 Figure 4. a) Percentage of studies presenting stratigraphic information or diagrams. The hatched bars
304 represent percentages re-calculated after excluding studies presenting macrofossil data. b) Percentage
305 of studies not presenting site coordinates, or coordinates to low resolution (<8 digit ordnance survey
306 reference).

307 Supplementary Figure 1. Changing motivations for palaeoecological studies of British peats. All core
308 records were assigned to one of five exclusive categories. This is a subjective decision and does not fully
309 account for the multiple motivations of individual authors.

310 Supplementary Figure 2. Changing length of publication for the studies we consider. Results include
311 journal papers and book chapters, but not PhD theses or books.

312 Supplementary Material 1. The British Peatland Palaeoecology Meta-database.

313 Supplementary Material 2. Suggested pro-forma for future palaeoecological publications.

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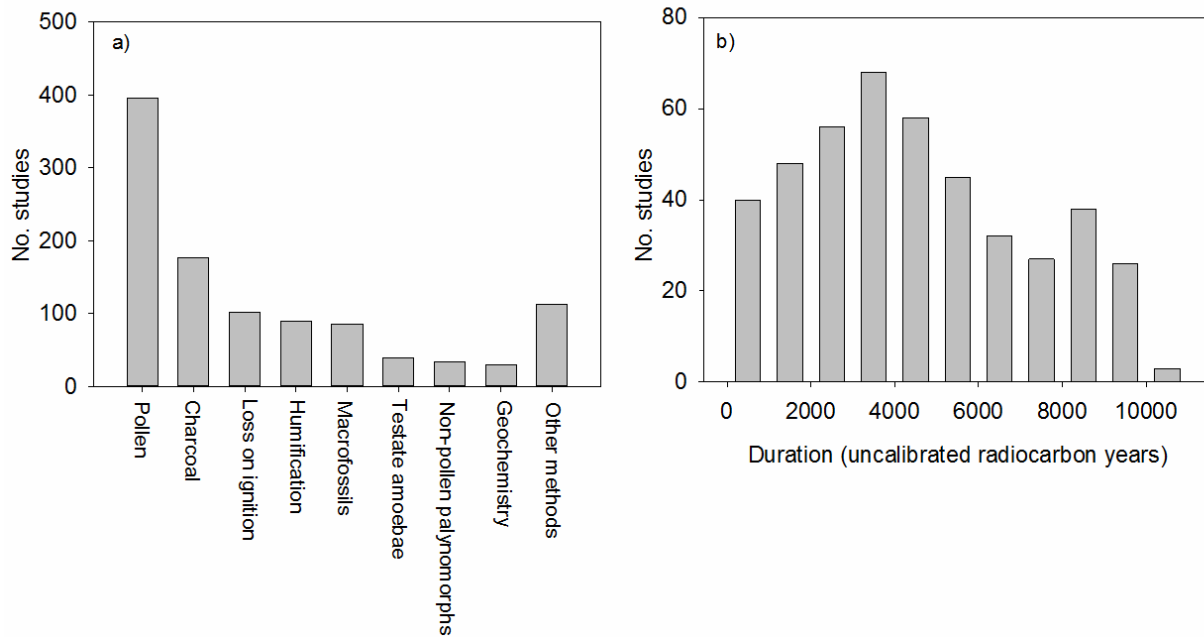
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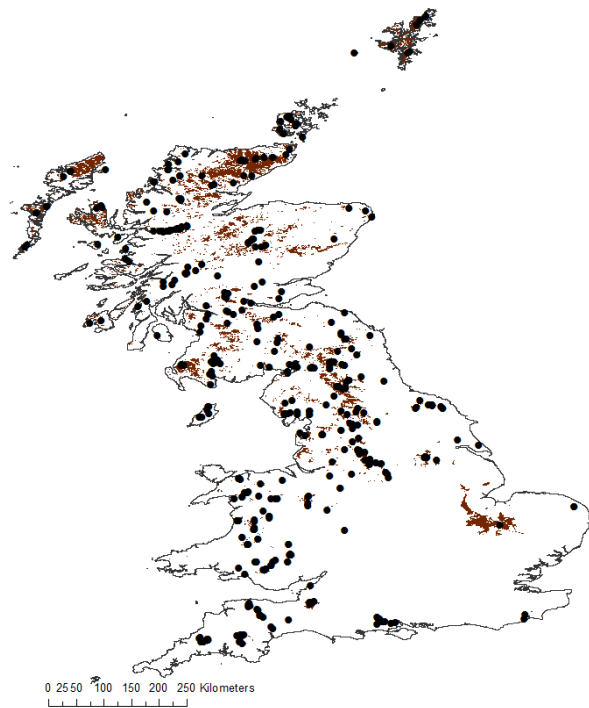
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409 Figure 1. a) Methods applied in the identified studies. The 'other methods' group includes a very broad
410 range of less popular methods such as magnetic susceptibility, x-radiography and coleopteran remains.
411 Studies were only counted as including NPPs where a broad suite of microfossils were identified (not
412 just *Sphagnum* spores for instance). b) Records by time period covered. Duration is calculated on a
413 simplistic basis as the time difference between the oldest date and year of publication (where sampling
414 was conducted through the entire peat column) or the oldest and youngest date (where sampling did
415 not continue to the surface). Radiocarbon ages are not calibrated.

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418 Figure 2. Spatial distribution of peatland palaeoecological studies. Area shaded in brown is peatland
419 distribution based on British Geological Survey surficial geology mapping.

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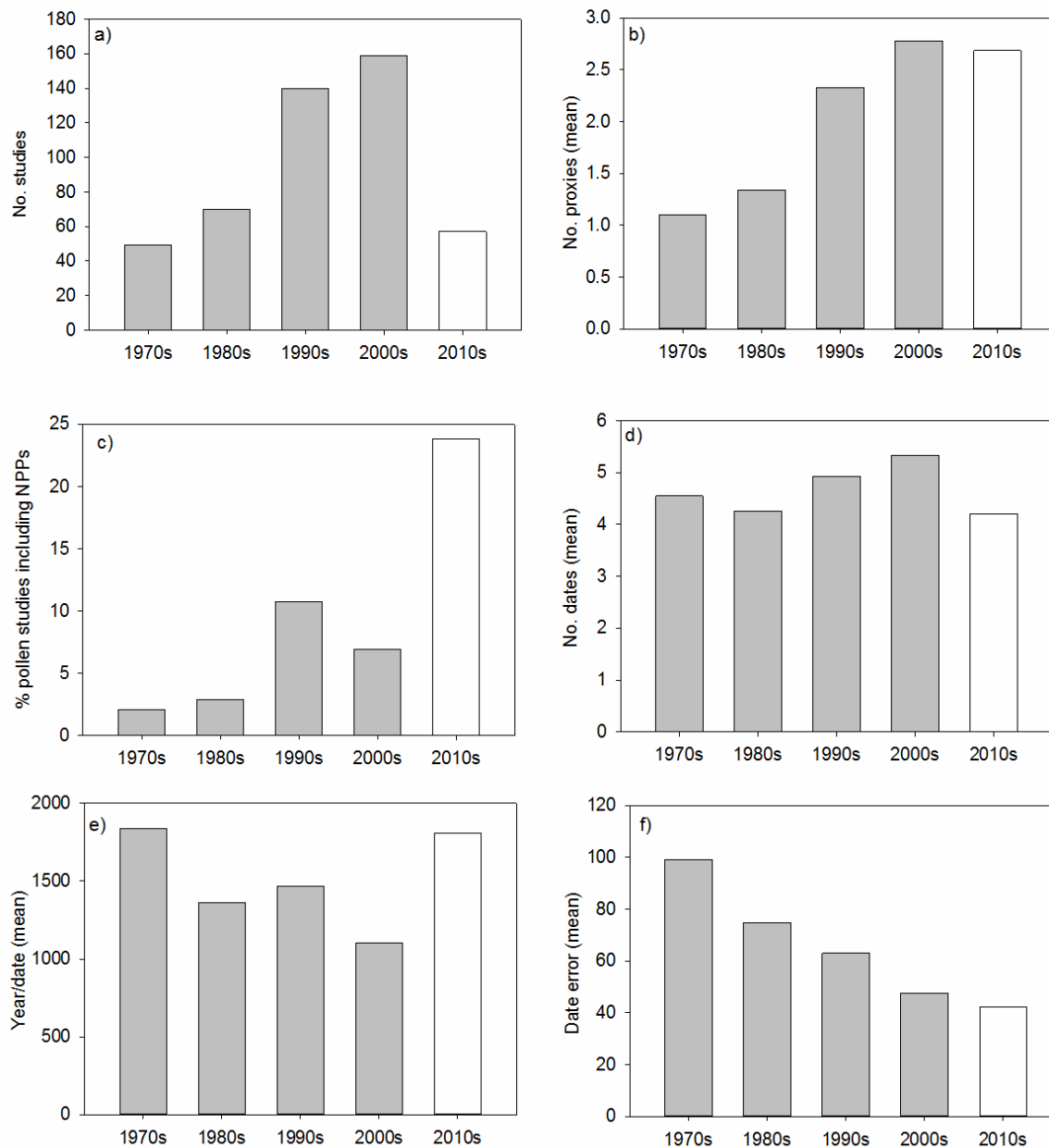
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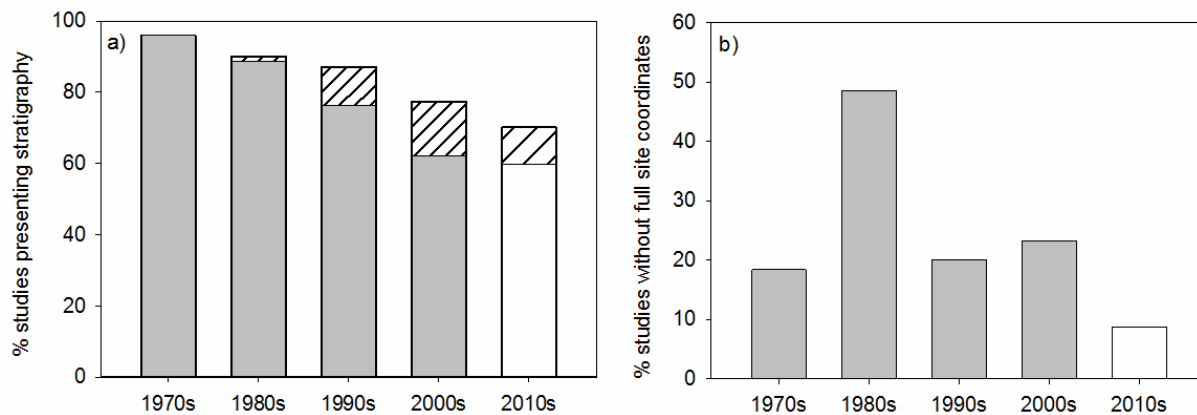
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435 Figure 3. Temporal trends in published palaeoecological site records from Great Britain. a) Number of
 436 studies over time; b) numbers of proxies employed by those studies; c) the proportion of pollen studies
 437 including non-pollen palynomorphs; d) dates per core; e) years per date; f) the mean error of dates. Bars
 438 for the decade from 2010 are shaded in white and comparisons to earlier decades should be made with
 439 caution. The number of proxies in b is based on the same groups used in Fig. 1.

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443 Figure 4. a) Percentage of studies presenting stratigraphic information or diagrams. The hatched bars
444 represent percentages re-calculated after excluding studies presenting macrofossil data. b) Percentage
445 of studies not presenting site coordinates, or coordinates to low resolution (<8 digit ordnance survey
446 reference).

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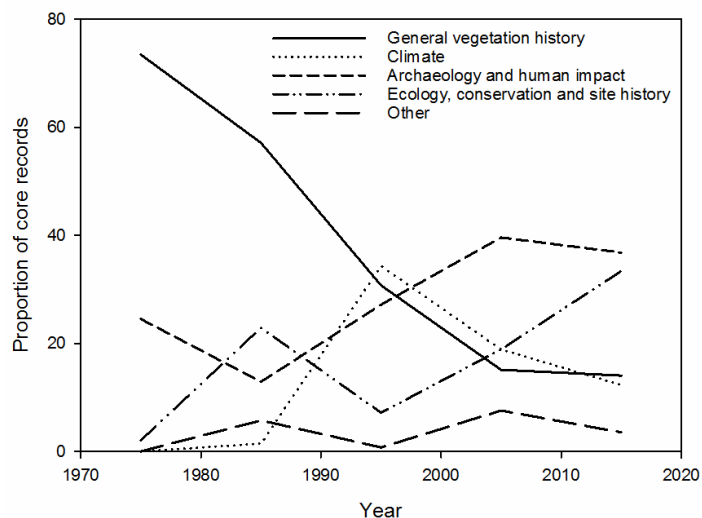
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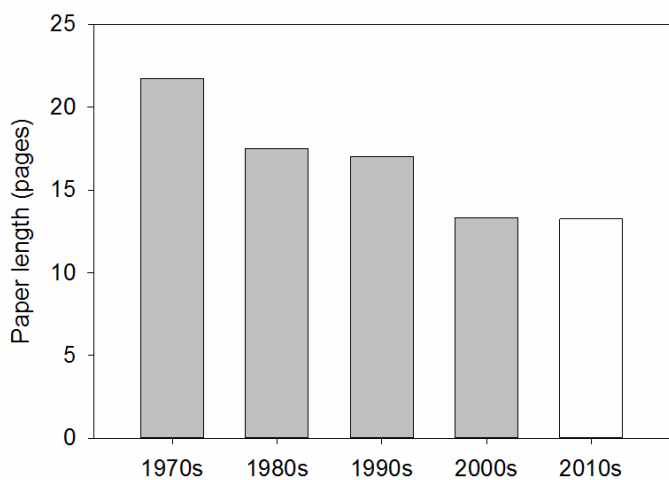
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465 Supplementary Figure 1. Changing motivations for palaeoecological studies of British peats. All core
466 records were assigned to one of five exclusive categories. This is a subjective decision and does not fully
467 account for the multiple motivations of individual authors.



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469 Supplementary Figure 2. Changing length of publication for the studies we consider. Results include
470 journal papers and book chapters, but not PhD theses or books.

Palaeoecological record meta-data.

Site Name:							
Core code: <i>As assigned by author.</i>							
Country:							
Region:							
Coordinates: <i>Please give to the highest resolution possible and specify coordinate system used (e.g. WGS84).</i>							
Site type (general): <i>Specify general nature of site (e.g. 'peatland').</i>							
Site type (specific): <i>Note specific nature of site (e.g. 'raised bog').</i>							
Site description: <i>Provide a description of the field site.</i>							
Coring method: <i>Specify the corer used and any further details.</i>							
Vegetation: <i>Please provide as much details as possible, ideally survey-data using an established system (specify).</i>							
Radiocarbon dates: <i>Please provide full details for all ¹⁴C dates.</i>	Depth lower (cm)	Depth upper (cm)	Date (BP)	Error	Laboratory code	Material dated	Method
Other dates: <i>Provide details of dates by other methods (e.g. tephra, ²¹⁰Pb).</i>							
Comments on dating: <i>Please provide any comments on dating and chronologies. For instance, details of any dates considered aberrant.</i>							
Palaeoecological methods applied: <i>Specify the methods applied.</i>							
Sampling resolution: <i>Specify the resolution of sampling for each method</i>							

<i>applied.</i>				
Stratigraphy: <i>Please provide as much detail as possible on core stratigraphy.</i>	Depth lower (cm)	Depth upper (cm)	Description (include Troels-Smith code if possible)	Contact
Comments on stratigraphy: <i>Please provide any comments on stratigraphy, for instance any evidence for an accumulation hiatus.</i>				
Have other data from the same core been described elsewhere? <i>If so, provide publication details.</i>				
Site photographs:	<i>Please append below.</i>			

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