

BAUER, MICHAEL and ROBERTSON, WILLIAM. *Am Faclair Beag* online Gaelic-English dictionary. <http://www.faclair.info/>

Reviewed by COLLEEN PATTON, *University of Arizona*

Am Faclair Beag is an online bilingual Scottish Gaelic (iso:gla) -English dictionary. Literally translated as ‘the little dictionary,’ *Am Faclair Baeg* (AFB) is a fully bilingual dictionary, available on both full and mobile web-browsing platforms. In addition to the modern lexical entries, AFB incorporates the entries in Edward Dwelly’s illustrated Gaelic dictionary (Dwelly 2001), which is based on his extensive fieldwork from the late 1800s. Michael Bauer and William Robertson formerly digitized the Dwelly dictionary into a searchable, online format (*Dwelly-d*) which exists at a separate location,¹ and it is this version of the Dwelly dictionary which has been incorporated into the AFB. In addition, each Dwelly entry present in AFB contains a direct link to a scanned image of the corresponding page of the dictionary as it appears in print. In order to make the dictionary as functional and relevant as possible for current speakers of Scottish Gaelic and English, AFB entries include a sound file of the headword’s pronunciation as well as a map that pinpoints the use of the word by speakers throughout Scotland. Moreover, proficient Gaelic speakers may engage as contributors by rating the relevance of a returned entry from a search and the frequency of use of lexical items.

While studying the Gaelic language, Michael Bauer and William Robertson encountered the need for searchable English-to-Gaelic and Gaelic-to-English dictionaries which were previously unavailable and were inspired to develop an online dictionary that would be searchable in either language. Consequently, AFB is fully bilingual – although the Gaelic interface (Figure 1) or summary information is presented first, a link is always available to switch to an English version (Figure 2). An ‘About Am Faclair Beag’ page provides background information about the creation of the dictionary. Also included in the front matter is an easy-to-find ‘Help’ page that provides a thorough guide to the online dictionary, including explanations of how to maximize the utility of the search features, as well as how to interpret the information presented in the lexical entry. The creators of AFB update the ‘News’ page as major milestones are reached (e.g., the creation of the maps feature). A ‘Feedback’ link provides an email address to contact with any comments, suggestions, questions, notes of typographical errors, etc. Bauer and Robertson developed AFB without public governmental or educational funding; it is truly a community project, and thus the webpage also has a link to make a donation to support the endeavor.

Key to the success of AFB is its inclusion of a digital version of the Dwelly dictionary side-by-side with the AFB dictionary in the results page, and, most importantly, the direct links within entries to the appropriate scanned page of Dwelly’s published

¹Dwelly-d is available at <http://www.cairnwater.co.uk/gaelicdictionary>

Figure 1. *Am Faclair Beag* homepage in GaelicFigure 2. *Am Faclair Beag* homepage in English

dictionary. The Dwelly dictionary, originally published in the early 1900s, remains an integral piece of scholarship for any person involved in Gaelic literature and linguistics, even to the extent that authors have penned poetry in its honor (McLeod 2013:166). Its continued use as a reference in the modern world is a testament to the outstanding work completed by Dwelly. For these reasons, access to the scans of the original pages is truly vital for those AFB users who wish to make use of the extremely detailed, contextualized information contained within the print version of the Dwelly dictionary. When one searches for a particular word, the results page typically contains two parts: the information retrieved from AFB on the left and that from the Dwelly dictionary on the right (Figure 3).

Figure 3. Results page of the search *ùraigs* 'brownie (spirit)'

For example, having searched the word *ùraisg*, the AFB side of the results the definition simply reads ‘brownie (spirit).’ The Dwelly, however, contains a full page of historical and contextual information which explains the mythology and folklore of the *ùraisg* (Figure 4).

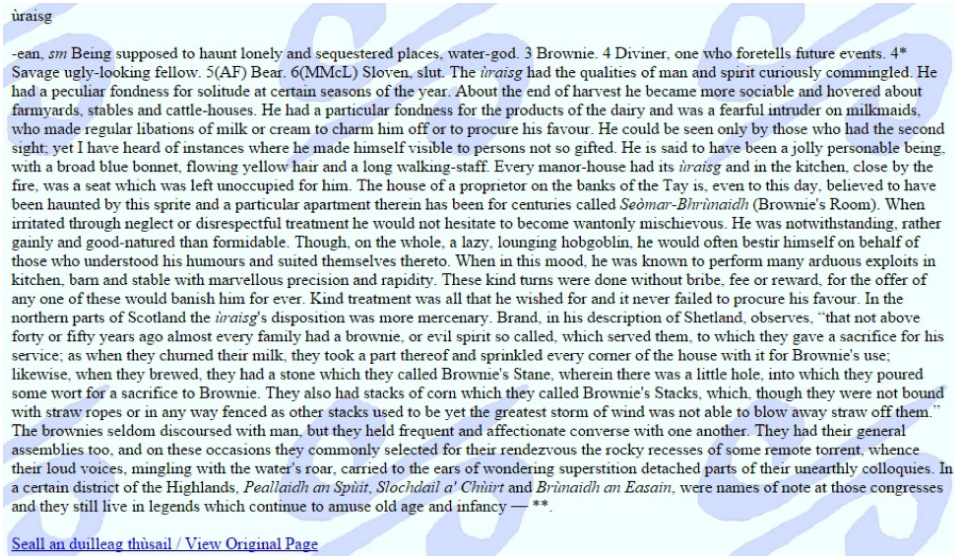


Figure 4. Dwelly entry for *ùraisg* when the headword is clicked from the results page

Unfortunately, this mass of text is hard to parse in its current presentation, and the purpose of the ‘Seall an duilleag thùsail / View original page’ hyperlink to the original Dwelly page scans is not always intuitive to users. If one does click the link, the scanned pages allow the user to view any accompanying pictures (which are not available in the digitized version) and to access a traditional print dictionary layout, which is more reader-friendly than the AFB. An example of these scanned pages of the original print dictionary can be found at <http://archive.org/stream/fa-clairgidhlo3dweuft#page/1001/mode/1up>, accessed through an AFB search of the word *ùraisg*.

Visible in the results list (as shown in Figure 3) are headwords, a phonetic transcription, a speaker icon for the sound file, definitions, a relevancy scale which denotes the relationship between the searched word and the items within the results list, and a usage scale which measures the frequency of use of a particular item. If a definition of an item in the results list is cut off, holding the mouse over the partial definition produces a box with the full definition without needing to open a new page. Once a headword is clicked, a new page opens to show the dictionary entry. A sample entry maximally includes eight major parts: headword, phonetic transcription of headword, sound clip of the headword, dialectal notes, grammatical notes, a rating of the relevance of the result to the searched item, a rating which notes the acceptability and regularity of use of an item by proficient speakers, and a map which highlights distribution of the use of a lexical item.

The variety of search settings yields superb functionality, particularly for learners. The search page lets users select result presentation by relevance or by alphabetical ordering and provides the option to restrict results to properly spelled words, complete with accent diacritics.² AFB also allows for a fuzzy search: this function allows users to approximate spellings and still have the dictionary successfully yield results of the intended lexeme. For example, if a user wants to find the verb ‘sleep’ *caidil*, but they enter *cadil* into the search bar as a ‘sounds like’ search, the dictionary will return entries which approximate that spelling, including the target *caidil* ‘sleep!’ and its related form *cadal* ‘sleeping.’ Thus, the fuzzy, ‘sounds like’ search function which ignores exact spelling is particularly useful for learners of the language and for proficient speakers who are not fully literate or who do not subscribe to the revised spelling conventions.

Because contemporary Gaelic orthography is remarkably opaque for learners, another key feature of the AFB search function is its ability to yield morphologically related entries from a single search item. The orthography of Gaelic represents both formerly productive phonological processes which are no longer a synchronic feature of the language and the complex morphophonological changes which encode grammatical information, such as consonant mutations. The consonant mutations, a unique and salient feature of the Celtic languages, cause the phonetic realization of a number of consonants to change within certain morphosyntactic contexts. For example, in order to create the regular past tense of a verb, the initial consonant of a verb root ‘mutates’ to a different consonant, e.g., *caidil* ‘sleep’ [ka.ʰil] → *chaidil* [xa.ʰil] ‘slept’. Many other aspects of the grammar are represented in the orthography, including nouns inflected for grammatical case. If a dictionary user searches a word in its genitive form, AFB will return the nominative citation form in the results list, e.g. *coise* ‘foot.GEN’ → *cas* ‘foot.NOM’. In addition, in the century since the publication of Dwelly’s dictionary, revisions to orthographic and spelling conventions have occurred, most recently in 2009 by Ughdarras Theisteanas na h-Alba/The Scottish Qualifications Authority. AFB recognizes both sets of spellings, and thus users can, for instance, search either *latha* or *là* (the revised spelling) and receive results for ‘day’.

Unlike other online dictionaries, AFB never displays a full listing of all entries in the dictionary, sorted alphabetically, to facilitate simple browsing. Users must have a particular lexical item in mind in order to effectively use AFB. This is potentially restrictive for those dictionary users who would enjoy browsing a list; its format is not helpful for those who need only the first letters or sounds of a word (e.g. teachers creating lesson plans, linguists creating stimuli, Gaelic users who only remember the first few sounds of a word), or those who would like to read through and come across new vocabulary or explore the whole dictionary.

²Grave accents can appear on five vowels in Scottish Gaelic (à è ì ò ù) and reflect contrastive length.

The headword is given in the Gaelic orthography. A modified³ International Phonetic Alphabet representation accompanies the headword, and a sound clip⁴ is often available both from the preliminary results list, as well as in the main entry after clicking the headword. The entries also include orthographic information for morphological changes, most commonly plurals (for example, *-achan* is listed as the plural suffix for *uisge* in Figure 5). In the example shown in Figure 5, *uisge* ‘water,’ two senses are given and distinguished by number. The second sense only occurs with a definite article, which is noted before the translation equivalent ‘rain.’ Other grammatical information (gender, number) specific to the lexical item and its morphology is also given under the headword: in Figure 5, this is (*fir. iol.*)—abbreviations of the Gaelic words *fireann* ‘masculine’ and *iolra* ‘plural’.

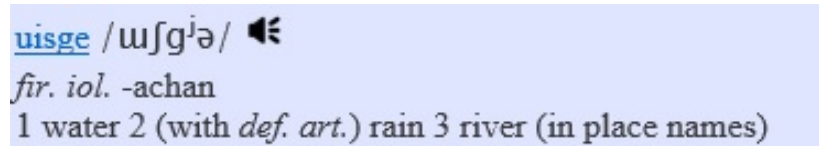


Figure 5. Entry for the headword *uisge*

Though more difficult to find than other typical front matter, a full list of abbreviations for parts of speech and sources of specific headwords is available through the “Help” page. Since it is a separate page, users can print the page and keep it as a reference while browsing the online dictionary or switching between tabs of a browser.

The full grammatical notes for *uisge* shown in Figure 6 include a variety of prepositional phrases to illustrate several consonant mutations. In addition, the phonetic representation of each phrase serves as a useful tool for Gaelic language learners familiar with the IPA, as Gaelic orthography can be quite opaque.

Usage judgments, which document the familiarity of a word to language users, are shown in Figure 7. Each entry can receive between one and three stars, where one star corresponds to ‘I don’t know this word,’ two stars corresponds to ‘I know this word but don’t use it,’ and three stars corresponds to ‘I know this word and use it’. The lack of star rating on the idiom *cha tarraing thu bó an comhair a h-earbaill* in Figure 7 suggests that it is not used by modern speakers, whereas *uisge*, with its 3 stars, is in common usage.

When a user searches a word, a search algorithm automatically ranks the returned results by their relevance to the search term. Registered proficient speakers may rate the relevance of a result to the term they searched in Gaelic or English. Relevance judgments are shown as a gradable colored bar to the right of the entry. Users can slide this bar to the right to indicate the relevance of the term—the farther right (green), the higher the recorded relevance of the result to the search term. A result

³The phonetic transcription contains standards used in traditional Celtic language transcription: for example, the capitalization of velarized/tense sonorants /R L N/ as opposed to the untensed counterparts /r l n/, a contrastive feature in Gaelic.

⁴These sound clips, as well as the phonetic transcriptions, are not representative of the pronunciation of any single dialect, but reflect a generalized standard Gaelic.

| | | | |
|--|---|--|-----------------------------------|
| <i>Gràmar - mar a dh'èiricheas am facal seo</i> <i>An facal seo gu an t-àit (ainmean neo-chinneach) - i ngrille</i> | | | |
| <i>An t-àiteal ainmeach</i> | <i>Gàidhlig</i> uisge mòr | <i>Fuaimneachadh</i> /uɣʲaː moɾ/ | <i>Beurla</i> great water |
| <i>An t-àiteal tabharach</i> | <i>èir</i> uisge mòr | /eɪˈ uɣʲaː moɾ/ | on great water |
| <i>An t-àiteal ghineach</i> | <i>fo</i> uisge mòr | /fɔ uɣʲaː moɾ/ | under great water |
| | <i>fuaim</i> uisge mòr | /fuajm uɣʲaː moɾ/ | sound of great water |
| <i>An facal seo leis an t-àit (ainmean neo-chinneach) - i ngrille</i> | | | |
| <i>An t-àiteal ainmeach</i> | <i>Gàidhlig</i> uisgeannan mòra | <i>Fuaimneachadh</i> /uɣʲaːNan moɾa/ | <i>Beurla</i> great waters |
| <i>An t-àiteal tabharach</i> | <i>èir</i> uisgeannan mòra | /eɪˈ uɣʲaːNan moɾa/ | on great waters |
| <i>An t-àiteal ghineach</i> | <i>fo</i> uisgeannan mòra | /fɔ uɣʲaːNan moɾa/ | under great waters |
| | <i>fuaim</i> uisgeannan mòra | /dah uɣʲaːNan moɾa/ | sound of great waters |
| <i>An facal seo leis an t-àit (ainmean chinneach) - i ngrille</i> | | | |
| <i>An t-àiteal ainmeach</i> | <i>Gàidhlig</i> an t-uisge mòr | <i>Fuaimneachadh</i> /aːN tuɣʲaː moɾ/ | <i>Beurla</i> the great rain |
| <i>An t-àiteal tabharach</i> | <i>èir</i> an t-uisge mòr | /eɪˈ aːN tuɣʲaː moɾ/ | on the great rain |
| <i>An t-àiteal ghineach</i> | <i>fo</i> an t-uisge mòr | /fɔnaː tuɣʲaː moɾ/ | under the great rain |
| | <i>fuaim</i> an t-uisge mòr | /dah aːN tuɣʲaː moɾ/ | (the) sound of the great rain |
| <i>An facal seo leis an t-àit (ainmean chinneach) - i ngrille</i> | | | |
| <i>An t-àiteal ainmeach</i> | <i>Gàidhlig</i> na h-uisgeannan mòra | <i>Fuaimneachadh</i> /naː huɣʲaːNan moɾa/ | <i>Beurla</i> the great waters |
| <i>An t-àiteal tabharach</i> | <i>èir</i> na h-uisgeannan mòra | /eɪˈ naː huɣʲaːNan moɾa/ | on the great waters |
| <i>An t-àiteal ghineach</i> | <i>fo</i> na h-uisgeannan mòra | /fɔ naː huɣʲaːNan moɾa/ | under the great waters |
| | <i>fuaim</i> na h-uisgeannan mòra | /fuajm naː huɣʲaːNan moɾa/ | (the) sound of the great waters |

Figure 6. Grammatical notes for *uisge* ‘water’.

which is somewhat relevant, but not entirely, can be marked by sliding the bar part-way across. Figure 7 gives the first five results for a search of ‘water’ in AFB, presented by their relevance to the term. The most relevant result is *uisge* ‘water,’ which has a fully green bar; in contrast, *each-uisge* ‘water-kelpie’ shows the default, lowest relevance, marked by the short red bar and yellow background. The other results have varying degrees of relevance between the red and the brightest green, suggesting they are not entirely relevant to the search ‘water’ (Figure 7). As more people rate the same word in the search, the algorithm adjusts to show the most highly relevant entries at the top of the list. If a user rated *each-uisge* as strongly relevant by sliding the bar completely to the right, the dictionary algorithm would remember this, then placing *each-uisge* closer to the top of the results list when ‘water’ is searched in the future.

These judgments can assist in gauging the vitality of the language to the level of individual words, given that many of Dwelly’s 80,000 entries may have fallen out of use during the prolonged shift away from Gaelic language (McLeod 2013:163). Moreover, judgments provide insights into regional usages, as the location of each respondent is also recorded (see Figure 8). The information collected can extend beyond the descriptive outcomes of participant interaction and may assist in gauging the current state of Gaelic as it undergoes revitalization.

AFB also collects location information when registered users vote on relevance or usage judgments. When a particular user votes, his dialect information and fluency is recorded, and a pinpoint is dropped to indicate the Gaelic community in which the relevant dialect is spoken (Michael Bauer p.c.). Four differently colored pinpoints represent the Gaelic fluency level (native vs. nonnative) and knowledge (active vs. passive) of the respondent (Figure 8). The gathered pinpoints highlight the use of a word by a single speaker, but can be indicative of regional dialect trends, as shown in the example given on the “Maps info” page of AFB and presented in Figure 9.













| | |
|---|--|
| <u>uisge</u> /ʊfɡjə/  <i>fir. iol. -achan</i> 1 water 2 (with <i>def. art.</i>) rain 3 river (in place names) |   |
| <u>bùrn</u> /bu:RN/  <i>fir. gin. bùirn, iol. -an</i> 1 water (fresh) 2 amount of water |   |
| <u>sàl</u> /sa:L/ <i>fir. gin. sàile</i> 1 salt water 2 seawater |   |
| <u>cha tarraing thu bó an comhair a h-earbail</u> you can't make water run uphill (<i>fig.</i>) |   |
| <u>each-uisge</u> <i>fir. gin. 7 iol. eich-uisge</i> water-kelpie |   |

Figure 7. Examples of relevance bars and usage stars as a rating system

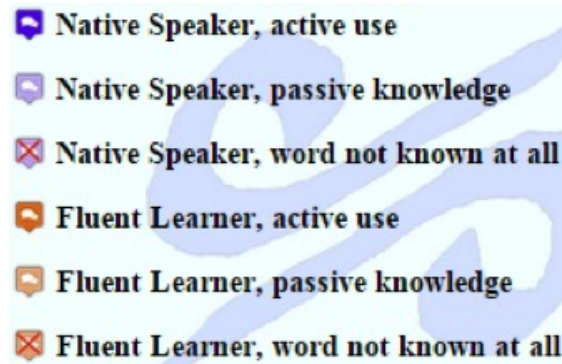


Figure 8. Map pinpoints defined by type of user

On the other hand, comparing these three for *dha-rìraobh*, *a-rìraobh* and *da-rìraobh* tells you that most likely, you're dealing with regional variation where *a-rìraobh* is a Northern Mairland feature, *da-rìraobh* South-Western and *dha-rìraobh* common elsewhere.



Figure 9. Dialect trends highlighted by the mapping feature

AFB crucially relies upon user feedback to shape the dictionary, and these features can in turn be used to inform further language documentation and revitalization efforts. The relevancy and usage judgments posted on the dictionary function as a tool to potentially track current language change, at least in terms of lexical shift and loss. Given that Dwelly's dictionary volumes were published more than a century

ago, the ease and speed of updating the online dictionary builds on the information collected by Dwelly and presents an accurate and current snapshot of the Gaelic lexicon. For example, searching vocabulary for new technology in English yields results in Gaelic solely from the AFB dictionary—the Dwelly comparison is unavailable, as these words were developed following his publication.

The AFB dictionary has many manipulable features which can be tailored to the needs of the user. The framework exists for each entry to be incredibly detailed, as exemplified by *uisge* ‘water’ in this review; however, at this point in time, it appears that for the majority of dictionary entries, it is only a framework—much of the most useful information for learners (sound clips, grammatical notes) is missing. In terms of illustrative sentences, most entries lack a true context-based example sentence. For example, the grammatical notes shown in Figure 6 demonstrate several prepositional phrases in which the noun *uisge* ‘water’ might be embedded. For the most basic learner, the notes, complete with a phonetic representation and the phrase written in the standard orthographic convention, show the necessary morphophonological changes, but leave something to be desired for more advanced users who might be interested in sentence-embedded contexts, etc. Although such cultural and historical context of use is available in an easy-to-read presentation if the links to the scans of the original Dwelly pages are followed, this requires understanding the purpose of the hyperlinks and leaving the dictionary website.

AFB’s online platform allows for updates and edits at a speed which print dictionaries simply cannot match. In addition, the degree of interactivity with Gaelic speakers, combined with the wide variety of features (maps, dialect charts, rating scales) developed by Bauer and Robertson are promising for future research into current linguistic trends. Given the status of Gaelic as an endangered language currently undergoing intense revitalization with government support and funding, there are several potential uses of this dictionary for language documentation and conservation. The dictionary serves as outstanding supplementary material for Gaelic language learners with its careful phonetic transcriptions and grammar notes. For the proficient speaker, the complex and numerous search options manipulate input information to produce the most meaningful results. Proficient speakers who wish to take part in the revitalization and development of Gaelic today are able to provide feedback which can be presented on the website immediately. Researchers investigating language change and language revitalization can make use of the information collected on dialect variation, relevancy, and usage to gain an accurate picture of current Gaelic language trends, whereas those interested in historical use can access the Dwelly dictionary directly and compare it to the results of AFB. Moreover, AFB can link directly to a Gaelic interest forum with wider audience than those seeking a dictionary, which facilitates a larger sense of Gaelic community. The *Am Faclair Beag* Online Gaelic-English dictionary is multipurpose and relevant to the Gaelic community and serves as a potential model for other endangered language communities hoping to create and disseminate a modern dictionary with maximal community member feedback.

References

- Dwelly, Edward. 2001. *Faclair Gàidhlig gu Beurla le Dealbhan/The illustrated Gaelic-English Dictionary*, 10th edn., Edinburgh: Birlinn Limited.
- McLeod, Wilson. 2013. 'Chan eil e even ann an Dwelly's!': The continuing legacy of Edward Dwelly's Gaelic Dictionary. In Campbell, Katherine, William Lamb & Neill Martin (eds.), *'A Guid Hairst': Collecting and archiving Scottish tradition: Essays in honour of Dr Margaret A. Mackay*. 163–170. Aachen : Shaker Publishing.
- Ughdarras Theisteanas na h-Alba/Scottish Qualifications Authority. 2009. *Gnàthachas Litreachaidh na Gàidhlig/Gaelic orthographic conventions*. Glasgow.

Colleen Patton
cpatton@email.arizona.edu