

The mess with monotypic taxa on Wikipedia and Wikidata

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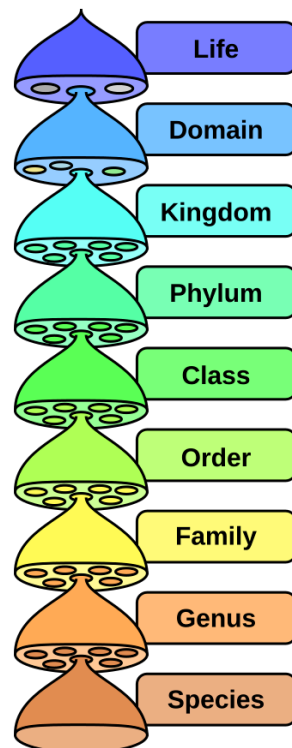
Dealing with biodiversity on the world's largest Wikipedia is full of little secrets. One of those tricks is dealing with *monotypic taxa* on it. The classification system used in biology is tiered, and tries to fit everything into rather artificial layers like **kingdom**, **phylum**, **class**, **order**, **family**, **genus**, **species**, as in the [image](#) here on the right.

In some cases, though, a species is so distinct from everything else that it gets its own *genus* or *family*. These monotypic taxa cause issues on classification in general, and some paradoxes here and there. For example, on the [English Wikipedia page for monotypic taxa](#) you can see examples like:

- The [aardvark](#) is the only extant member of the genus [Orycteropus](#), the family [Orycteropodidae](#), and the order [Tubulidentata](#).

and

- The [narwhal](#) is a medium-sized [cetacean](#) that is the only member of the monotypic genus *Monodon*.



Wikipedia, as a community-driven encyclopedia, has no central authority on how to organize articles. To make matters more complex, each language-version has its own guidelines and tacit principles. In some cases where multiple titles for a given article are possible, editors use [#REDIRECT](#) to drive the flow to the main page for a subject.

The million-article questions are: should there be a different page for each tier? If not, to which tier should they all redirect? Should this standard somehow be enforced for all 300+ language editions of Wikipedia?

These are open questions. Let's look at the case of the Aardvark. There are Wikipedia pages in +100 languages pointing to [the species](#), 20 to [the genus](#), 43 to [the family](#) and a mere 9 to [the order](#).

Some language editions have pages for the four different levels, some for three, some, two, and some have only one: w.wiki/Dkp6.

The difficulties here propagate to Wikidata too, where the Wikimedia infrastructure currently host these “interwiki” links:

The screenshot shows the Wikipedia page for *Cephalotus*. At the top right, there is a language selection menu labeled "13 idiomas". The menu is open, showing a list of languages: العربية, فارسی, مصری, Српски / srpski, Українська, Bahasa Indonesia, and Bosanski. Below the list is a button labeled "Adicionar idiomas". The main content of the page is partially visible, showing the title "Cephalotus", a "Página Discussão" link, and a "De Wikipedia" section. The text describes the genus *Cephalotus* and mentions its species, *Cephalotus foliolaris*, which is the Albany pitfall plant. It also mentions that the plant is endemic to peaty swamps in the southwestern Western Australia.

[Cephalotus](#) on en.wiki, as of April 2025 with links to 13 different languages:


The interface (in Portuguese, that is my mother tongue) says that the page is missing in Portuguese. There, however, it does exist, but as [Cephalotaceae](#)! The page in portuguese has only 9 interwiki links and thus many links are lost in this process. If you go to the page for [Cephalotus follicularis on the German Wikipedia](#), you will see 17 interwiki links, but a completely different set.

lang_count	targets
14	Cephalotus follicularis
12	Cephalotus
6	Cephalotaceae
2	Cephalotus follicularis; Cephalotaceae
2	Cephalotus follicularis; Cephalotus; Cephalotaceae

Interwiki links for the monotypic family Cephalotaceae, the genus *Cephalotus* and the species *Cephalotus follicularis* (<https://w.wiki/Dkpr>)

The goal of this article is to say that **there is a technical way to fix this mess via Wikidata!** Or if not fix, at least improve the situation a bit.

My motivation to write this article started when a friend ([Richard Littauer](#)) identified a weird result on inat2wiki. He was searching for Wikipedia pages missing articles for the species on a particular iNaturalist project. The tool showed that an English Wikipedia page was missing for *Australotichopus mollis*, as depicted below:

Image	Group	Taxon Name	Number of observations	Observations by wellington-botsoc-summer-camp-2025	Wikidata ID	Wikipages missing
	Animalia	Australotichopus mollis	778	259811737 [iNat, upload] (research; cc-by),	Q4305674	en

"Wellington-botsoc-summer-camp-2025" through [inat2wiki](#) showing the *en* page missing.

But when he searched for the species name on English Wikipedia, he got a hit, though, what was quite confusing:

Australostichopus 2 languages

Article [Talk](#) Read [Edit](#) [View history](#) [Tools](#)

From Wikipedia, the free encyclopedia

Australostichopus is a genus of [sea cucumbers](#) in the family [Stichopodidae](#). It is [monotypic](#), being represented by the single species ***Australostichopus mollis***,^[2] commonly known as the **brown sea cucumber** or **Australasian sea cucumber**.^[3] This species has stimulated interest for its fishery potential in the Southern Hemisphere,^[4] and for its capability to reduce waste produced by [aquaculture](#). Despite its ecological role and abundance in New Zealand coastal waters, the scarcity of knowledge regarding *A. mollis* biology and ecology has hindered the development of a stable [fishery](#) industry. Importantly, *A. mollis* represents promising business potential within an important Asian market.^[5] Recently its potential as a [functional food](#) has been evaluated, highlighting the nutritious components^[6]

Distribution [\[edit \]](#)

Australasian sea cucumber

Conservation status

Extinct [EX](#) Threatened [EW](#) [CR](#) [EN](#) [VU](#) [NT](#) [LC](#) Least Concern [\(IUCN 3.1\)](#)^[1]

Only the page [Australostichopus](#) existed at the time

The entry for the species *Australostichopus molis* on Wikidata did not show a link for the Wikipedia page, indeed, explaining why inat2wiki thought the page did not exist.

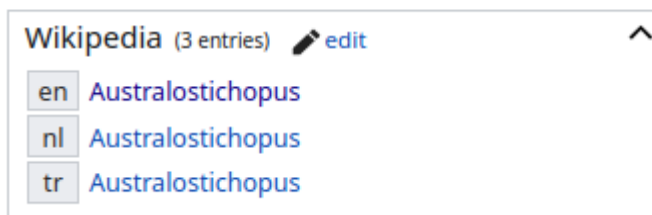
Wikipedia (5 entries) [edit](#)

bg	Australostichopus mollis
ceb	Australostichopus mollis
cs	Australostichopus mollis
fr	Australostichopus mollis
nl	Australostichopus mollis

The [Wikidata interlink box](#) for *Australostichopus mollis*, missing en.wiki

As mentioned before, the mess with monotypic taxa is not necessarily easy to fix, as there is no governance mechanism to

decide on what is the right or wrong modeling for *all* languages at once. Let's see what the Wikidata entry for the genus looks like:



The [Wikidata interlink box](#) for *Australostichopus*, showing en.wiki

You may see that there is a Wikipedia version, *nl*, which had both entries! This is common for some Wikis where automated bots create taxon pages, adding machine-driven complexity to the equation.

The issue with monotypic taxa is so common that there is a dedicated redirect message for these cases. If you go to the [#REDIRECT page for *Australostichopus mollis* on English Wikipedia](#), you may see a message like this, triggered by the [{{R from monotypic taxon}}](#) template:

↳ [Australostichopus](#)

This page is a redirect. The following categories are used to track and monitor this redirect:

- **To a monotypic taxon:** This is a redirect from the only lower-ranking member of a monotypic taxon to its monotypic taxon. In a biology-related article, when for example a genus has only one species, the [binomial name](#) may be a redirect to the genus.
 - Use [{{R from monotypic taxon}}](#) instead when making a redirect *from* a monotypic taxon to its only member, for example, from a family name to its sole genus.
- **From a page move:** This is a redirect from a page that has been moved (renamed). This page was kept as a redirect to avoid breaking links, both internal and external, that may have been made to the old page name.

When appropriate, [protection levels](#) are automatically sensed, described and categorized.

So, technically speaking, the page on English Wikipedia for *Australoschopus mollis* does exist, but it is a #REDIRECT page! It would be great if I could tell Wikidata just that, right? That there is a nice redirection there, instead of assuming nothing.

For our happiness, **there is a way to do it**. This is actually a [recent-ish feature of Wikidata](#), which became available in October 2022. It is possible to add a link to the redirect page on Wikidata and tag it as an [“intentional sitelink to redirect”](#) in the [Special:SetSiteLink](#) page.

Set Item sitelink

This form allows you to set the sitelink of an Item. You need to provide the ID of the Item (e.g. Q23), a site ID (e.g. "enwiki") and the sitelink to set to. Additionally you can set various badges for this sitelink which are listed below.

ID:

Site ID:

Sitelink:

Badges:

- ☐ good article badge
- ☐ featured article badge
- ☐ recommended article
- ☐ featured list badge
- ☐ featured portal badge
- ☐ not proofread
- ☐ problematic
- ☐ proofread
- ☐ validated
- ☐ digital document
- ☐ good list badge
- ☐ sitelink to redirect
- ☒ intentional sitelink to redirect

Set the sitelink

After that, Wikidata becomes aware of the existence of the page! The link should show up now in SPARQL queries and similar situations, including inat2wiki. You may see a little arrow on Wikidata indicating it is a sitelink to a redirect.




The Wikidata interwiki box, now showing en.wiki with a little arrow

There should be ways of automating this task, though, at least for the links with the proper template on English Wikipedia. I've added this [task to my idea-dump GitHub repository](#) and hopefully one day I'll be able to get to it. But for now, be on the lookout for monotypic taxa and the mess around it on Wikipedia — and know that there are ways to, at least, put this mess a bit more under control!

Bonus: Fixing issues with synonyms

There is also a variation on this theme, as a species may have been assigned multiple names through history and it is common practice on Wikidata to have a single item for each *taxon name*. This happens, for example, with *[Blechnum parrisiae](#)*, a valid taxon on iNaturalist but redirected to *[Doodia australis](#)* on English Wikipedia. For now, the solution is the same: adding the link to enwiki as an intentional sitelink to redirect.

Image	Group	Taxon Name	Number of observations	Observations by wellington-botsoc-summer-camp-2025	Wikidata ID	Wikipages missing
	Plantae	Blechnum parrisiae	1892	259808936 [iNat, upload] (research; cc-by),	Q42731918	wikidata_image, en

Blechnum parrisiae

Article [Talk](#)

From Wikipedia, the free encyclopedia

[Redirect page](#)

↳ [Doodia australis](#)

Blechnum parrisiae shows up as missing on inat2wiki, but is one more case of a missing redirect link.