

High-level accessibility review – BTAA (Springer Nature - final version)

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January 4th, 2018



High-level accessibility review – Springer Nature

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Springer Nature

Summary (top 3 problems for Springer Nature)

This assessment covers the Springer Nature application. All things considered, there are very few issues in this application, and the level of accessibility found throughout the assessed page is above what we normally would expect. The application has clearly been developed with accessibility in mind, and the use of ARIA provides a substantial boost to the experience, using a screen reader. Still, the top 3 issues found in this application were:

1. **Google Ads** – The most common issues found throughout the pages relate to the Google Ads which, of course, are beyond Springer Nature’s control. These issues are reflected in both automated findings from Axe, and screen reader findings using NVDA.
2. **Inconsistent heading structure** – Some of the page rely on multiple H1 elements to structure content, and this causes confusion for users who cannot see the screen. Reviewing the heading structure of the documents to use fewer level 1 headings and a better distribution across other levels of headings would help with navigation.
3. **Link text that are not meaningful** – Link text of links in the application are not meaningful, even within their immediate context. This is especially true in the individual article pages. A different method to provide complementary information to links (such as the aria-label attribute) would be a better approach to providing the expected context.

Note about the PDF: While the PDF itself is not accessible, it can be considered as an alternative to the page content in this case, and could remain unchanged, as long as the HTML version met requirements.

Accessibility findings

Project wide issues

The issues presented in this section were identified in multiple pages, and are recorded here to avoid repetition. These are applicable to each screen. Due to particularities, similar issues are reported on a page per page basis, where applicable.

Automated findings using Axe

- **SC 1.1.1** – Small arrows in top right corner of banner ads are missing valid alt text values.
- **SC 1.1.1** – Images within the advertisement iFrames are missing descriptive alt text.
- **SC 1.4.3** – Multiple issues with insufficient color contrast, especially in the navigation menu.
- **SC 2.4.1** – Advertisement iFrames are not provided unique title attribute values.
- **SC 2.4.4** – Links in advertisement iFrames need to have meaningful, discernible link text.
- **SC 3.1.1** – HTML documents inside iFrames are missing valid lang attribute values.

Issues found through automated testing come from the Axe plugin, an open source accessibility testing tool that is available for Firefox and Chrome. Details here: <https://www.deque.com/products/axe/>.

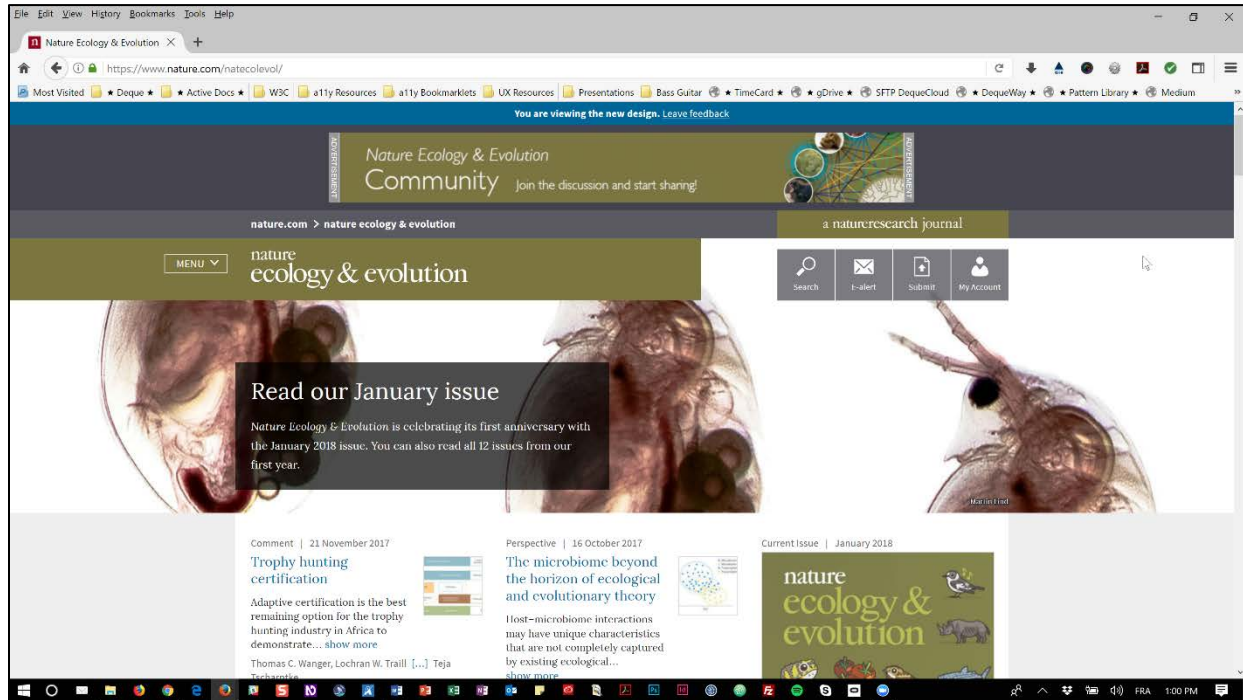
Additional manual findings using NVDA screen reader

- **SC 2.4.7** – The keyboard focus ring is not always clearly visible to keyboard only users.
- **SC 4.1.2** – The state if the navigation (collapsed or expanded) is not conveyed to screen readers.

1. Springer Nature landing page

Source: <https://www.nature.com/natecolevol/>

Test case: Test initial journal interface to ensure menus (especially one to the left of the journal name/banner), search boxes, links, icons/images, etc. are accessible.



Automated findings using Axe

- **SC 1.1.1** – The “Nature Ecology & Evolution” linked image is missing descriptive alt text.
- **SC 3.3.2** – Select dropdown within search is missing a programmatic label association.

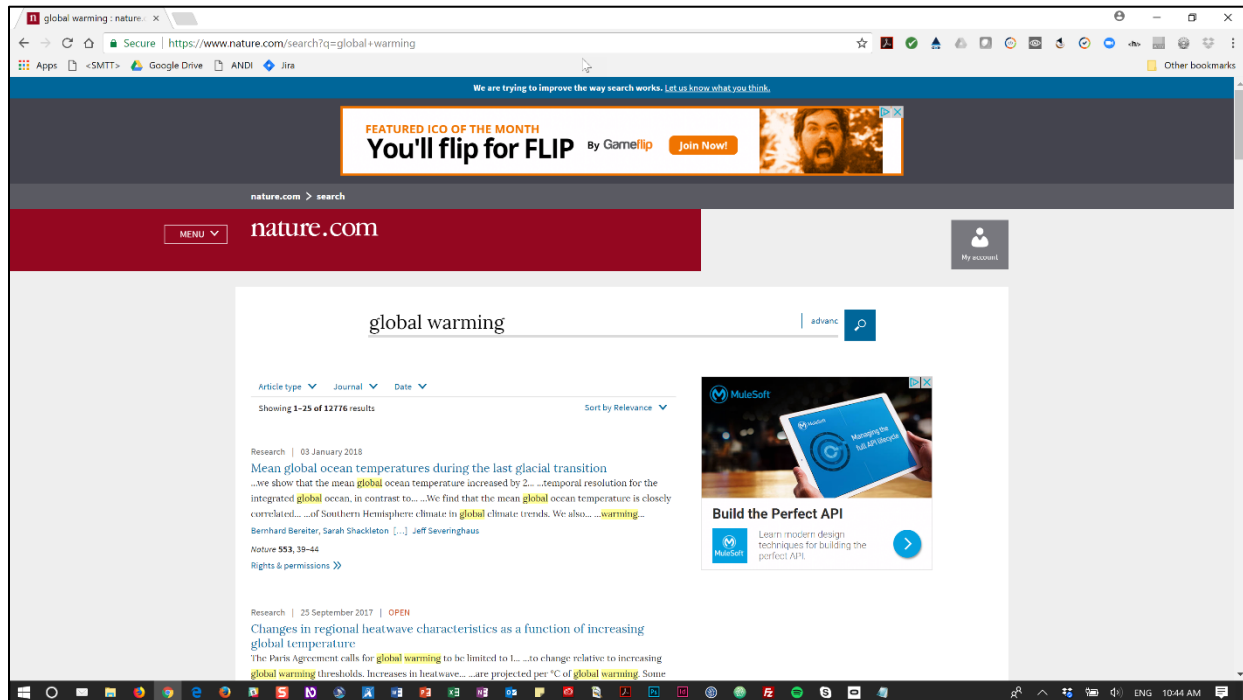
Additional manual findings using NVDA screen reader

- **SC 1.1.1** – Alt text for the image of the current issue only announces, "Volume 2, Issue 1".
- **SC 1.3.1** – The "Featured Content" heading hidden off screen should be marked up as a H2.
- **SC 1.3.1** – Inconsistent heading structure hinders predictability of navigation for screen readers.
- **SC 1.3.1** – Document contains too many level 1 headings and makes navigating less efficient.
- **SC 2.4.4** – The "Show more" and "Close menu" buttons are not meaningful out of context.
- **SC 2.4.4** – The "View all" links are not meaningful out of their immediate contexts.
- **SC 4.1.2** – Four “Close Menu” buttons can be heard when navigating with a screen reader.

2. Springer Nature simple search results page

Source: <https://www.nature.com/search?q=global+warming>

Test case: From initial interface, enter a simple search in the search for: global warming and select “Search”. Test search results page, including dropdowns at top: ‘article type’, ‘journal’, ‘date,’ ‘sort by’. Try to refine your search using these limits from the dropdowns: article type: research; journals: nature; date: last year.



Automated findings using Axe

- **SC 1.1.1** – The “Nature.com” linked image is missing descriptive alt text.

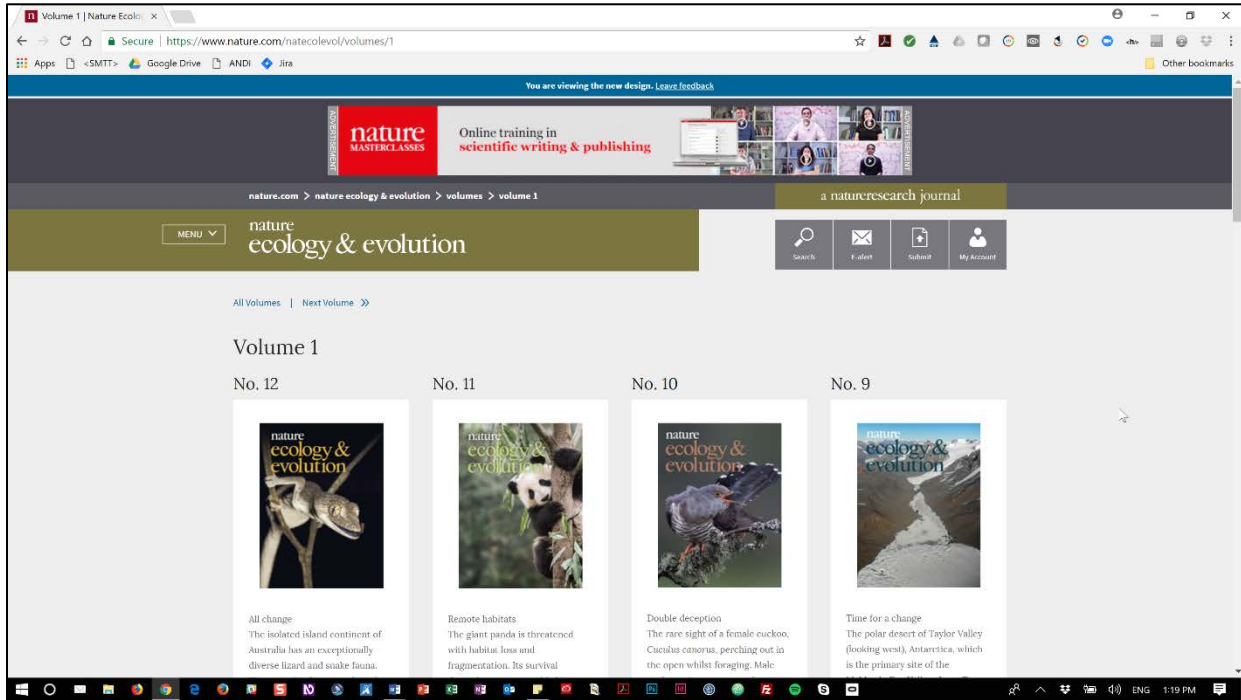
Additional manual findings using NVDA screen reader

- **SC 2.4.4** – The “Rights and Permissions” links aren’t meaningful out of their immediate context.
- **SC 3.2.2** – Applying any of the filters refreshes the page unexpectedly and sets focus back to top.

3. Springer Nature Test a Journal's "all volumes" page

Source: <https://www.nature.com/natecoevol/volumes/1>

Test case: Test a journal's "all volumes page".



Automated findings using Axe

- **SC 1.1.1** – The "Nature Ecology & Evolution" linked image is missing descriptive alt text.

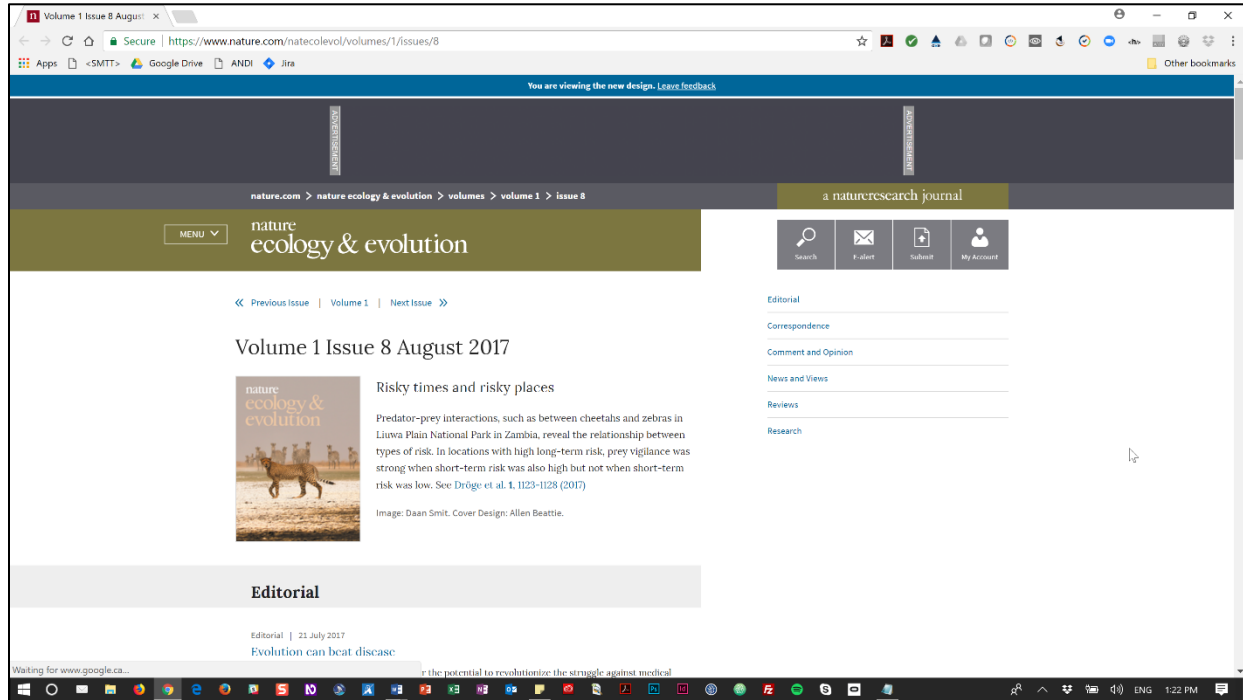
Additional manual findings using NVDA screen reader

- **SC 1.3.1** – Inconsistent heading structure hinders predictability of navigation for screen readers.
- **SC 1.3.1** – Document contains too many level 1 headings and makes navigating less efficient.
- **SC 1.3.1** – Each issue has a heading (All Change, etc.) that is not marked up as such.
- **SC 4.1.2** – Four "Close Menu" buttons can be heard when navigating with a screen reader.

4. Springer Nature Test a specific volume/issue page

Source: <https://www.nature.com/natecolevol/volumes/1/issues/8>

Test case: Select and test a specific volume/issue page.



Automated findings using Axe

- **SC 1.1.1** – The “Nature Ecology & Evolution” linked image is missing descriptive alt text.
- **SC 1.3.1** – There is a main landmark nested inside an already existing main landmark.
- **SC 2.4.1** – There is an iFrame that has not been assigned a descriptive title attribute value.

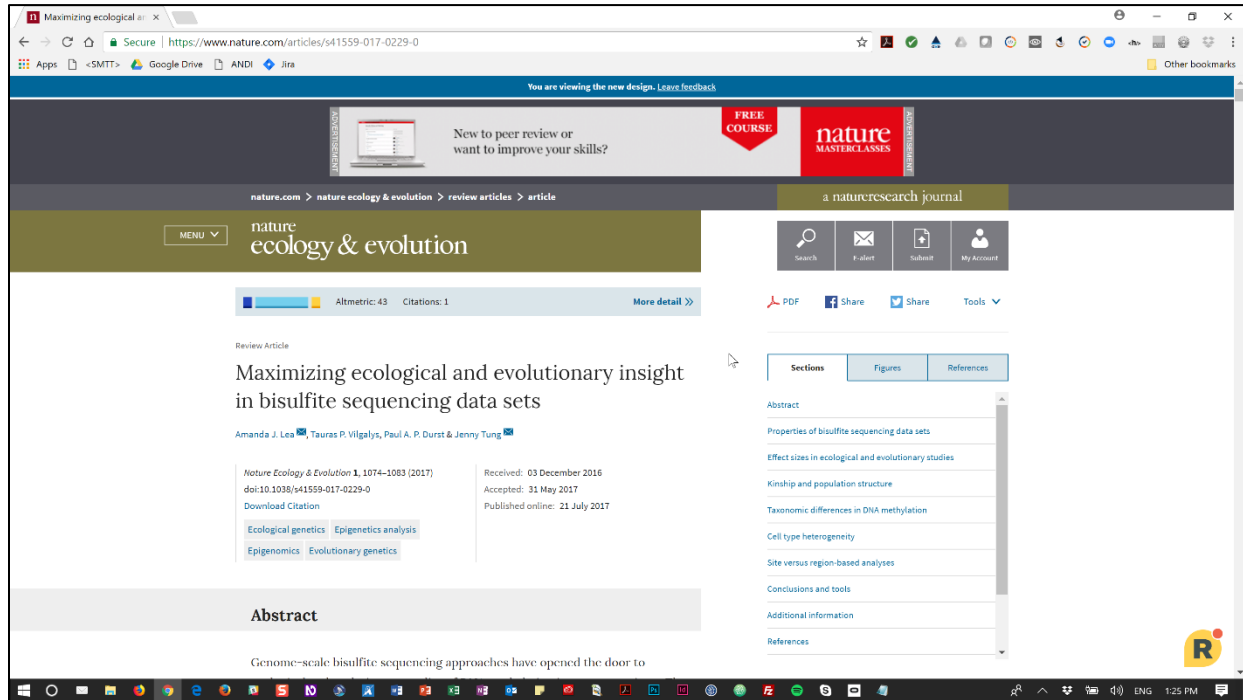
Additional manual findings using NVDA screen reader

- **SC 1.3.1** – Inconsistent heading structure hinders predictability of navigation for screen readers.
- **SC 4.1.2** – Four “Close Menu” buttons can be heard when navigating with a screen reader.

5. Springer Nature individual article page

Source: <https://www.nature.com/articles/s41559-017-0229-0>

Test case: Select an individual article by clicking on one article from the volume/issue page. Is the abstract/article view accessible? Is the actual file (PDF) accessible?



Automated findings using Axe

- **SC 1.1.1** – The “Nature Ecology & Evolution” linked image is missing descriptive alt text.
- **SC 1.3.1** – There is a main landmark nested inside an already existing main landmark.
- **SC 2.4.1** – There are two iFrames that have not been assigned a descriptive title attribute value.
- **SC 4.1.1** – ID attribute values of objects within a single page must be unique.

Additional manual findings using NVDA screen reader

- **SC 1.1.1** – Figures, once represented in the side bar, no longer have descriptions provided.
- **SC 1.3.1** – The “Featured Content” heading hidden off screen should be marked up as a H2.
- **SC 2.4.4** – The “More details” link isn’t meaningful out of its immediate context.
- **SC 2.4.4** – Fig links (1, S2, etc.) are not meaningful within their immediate context.
- **SC 2.4.4** – Complementary reference links provided through title attributes are unreliable.
- **SC 2.4.4** – Links and buttons in the “References” section are not meaningful within context.
- **SC 2.4.4** – “View in article” and “Full size image” links are not meaningful within context.
- **SC 4.1.2** – Four “Close Menu” buttons can be heard when navigating with a screen reader.
- **SC 4.1.2** – Math equations marked up using MathJax are not conveyed to screen readers.
- **SC 4.1.2** – The “Tools” link does not convey information about the state of the modal.
- **SC 4.1.2** – The PDF document is not tagged and presents serious issues for accessibility.

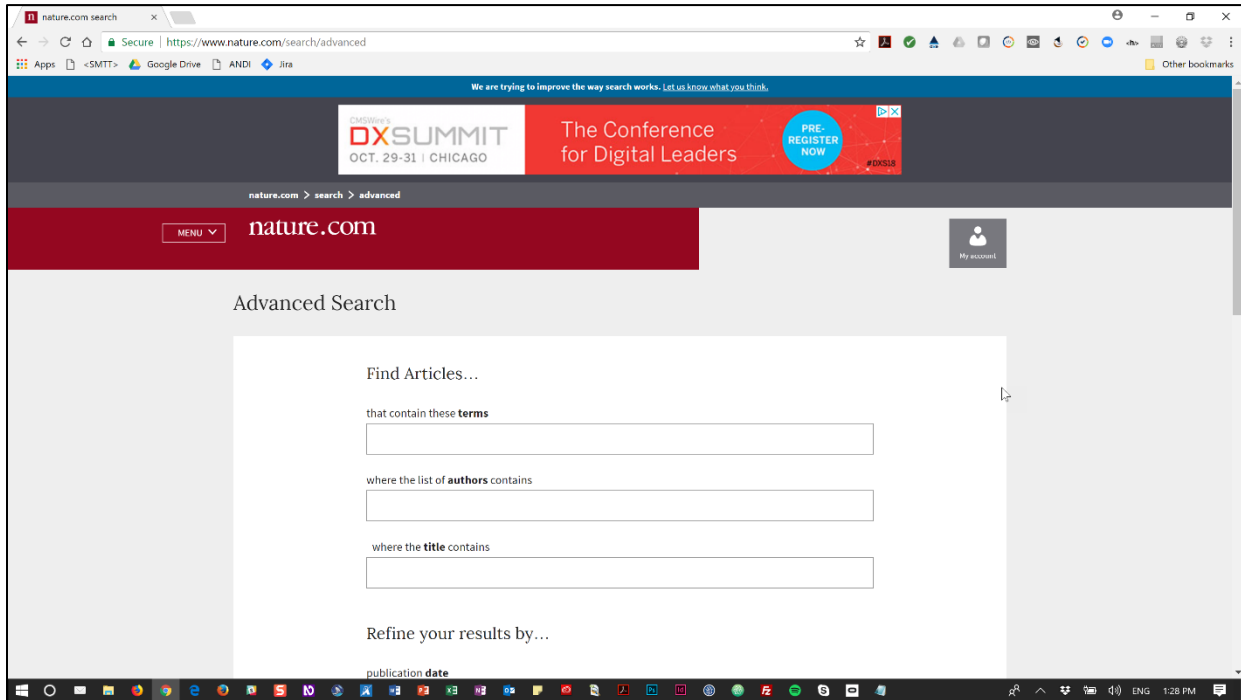
Note:

Due to time constraints, the Recommendations widget has not been assessed as part of this review.

6. Springer Nature advanced search page

Source: <https://www.nature.com/search/advanced>

Test case: Test “Advanced Search” page for accessibility - no need to do an actual search/analyze results page since that’s covered above.



Automated findings using Axe

- **SC 1.1.1** – Publication date controls are not considered to have labels since they’re disabled.

Additional manual findings using NVDA screen reader

- **SC 4.1.2** – The publication years controls cannot easily be differentiated with a screen reader.
- **SC 4.1.2** – Error message conveyed for the journals control is not conveyed to screen readers.
- **SC 4.1.2** – Selected Journals added as keywords are not confirmed by screen readers.
- **SC 4.1.2** – Removing a Journal keyword checkbox doesn’t confirm interaction to screen readers.