High–level accessibility review – BTAA

(Google Scholar Platform)

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December 18, 2020

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Google Scholar Platform

Summary

Top 3 problems for the Google Scholar Platform

This assessment covers portions of the Google Scholar Platform. The assessment revealed moderate problems with screen reader compatibility, resulting in screen reader users rarely missing critical information needed to understand content and operate features.

1. **Name Role Value –** The role, required attributes or accessible name for interactive elements is missing or incorrect in some key functions. This would cause some hardships to users who want to leverage these functions.
2. **Contrast –** Some text is slightly low in contrast, which would potentially cause low vision users to either miss or have difficulty to perceive the affected content.
3. **Semantics –** Some semantics are either inappropriately used or missing, which causes AT users to not benefit from the same structuring of data that other users would be able to benefit from.

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 still reported on a page per page basis, where applicable.

Automated findings using Axe

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

1. **SC 3.1.1 A** – The page is missing a programmatic indication of the main page language
2. **SC 4.1.2 A** – The hamburger menu is missing a programmatic name that describes its purpose

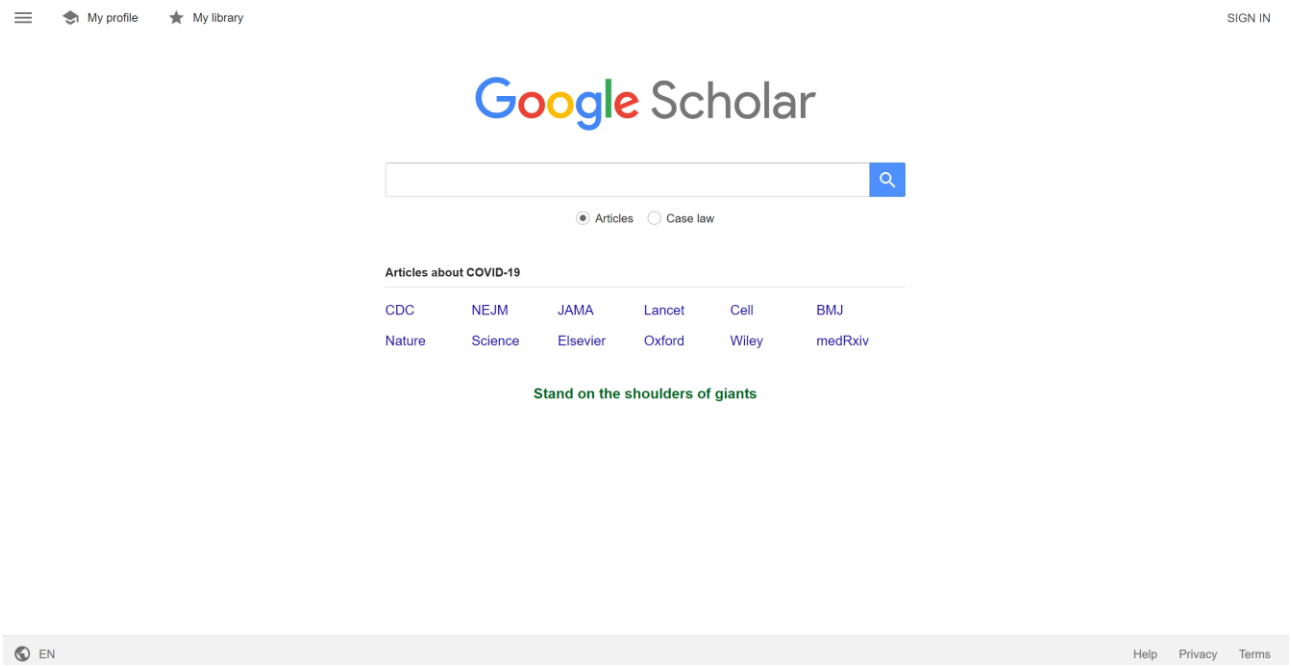
Additional manual findings using NVDA screen reader

1. **None**

1. GOOGLE SCHOLAR Initial Landing

Source: https://scholar.google.com/

Test case: Test initial interface/landing page to ensure menus, search box, images, icons, etc. are accessible.



Automated findings using Axe

1. **SC 1.1.1 A** – The 'Google Scholar' image is missing an alternative description

Additional manual findings using NVDA screen reader

1. **SC 1.4.5 AA** – The "Scholar" portion of the 'Google Scholar' image is implemented as an image of text instead of real text
2. **SC 4.1.2 A** – The hamburger menu is missing a programmatic indication of its expanded/collapsed state.
3. **SC 1.3.1 A** – The listing of links beneath the 'Articles about COVID-19' heading are inappropriately marked up as heading 3s
4. **SC 3.2.2 A** – When a user makes any change to the radio button selection, the focus is moved to the top of the page, to the hamburger menu
5. **SC 1.3.1 A** – The 'Articles' and 'Case law' checkboxes are inappropriately indexed, currently read as Articles radio button 1 of 4 and Case law radio button 2 of 4. While this may be appropriate when the additional two inputs are exposed, it is inappropriate when only two are exposed.
6. **SC 4.1.3 A** – When a user types a search term into the input field, the screen reader does not announce that there are auto-complete / auto-suggest options that can be navigated to.
7. **SC 1.4.11 AA** – When a user types a search term into the input field and navigates the options in the auto-complete / auto-suggest function, the focus indicator for the selected item is low in contrast. A focus indicator of #C6DAFC against an adjacent #FFFFFF results in 1.4:1 contrast. 3:1 is expected.

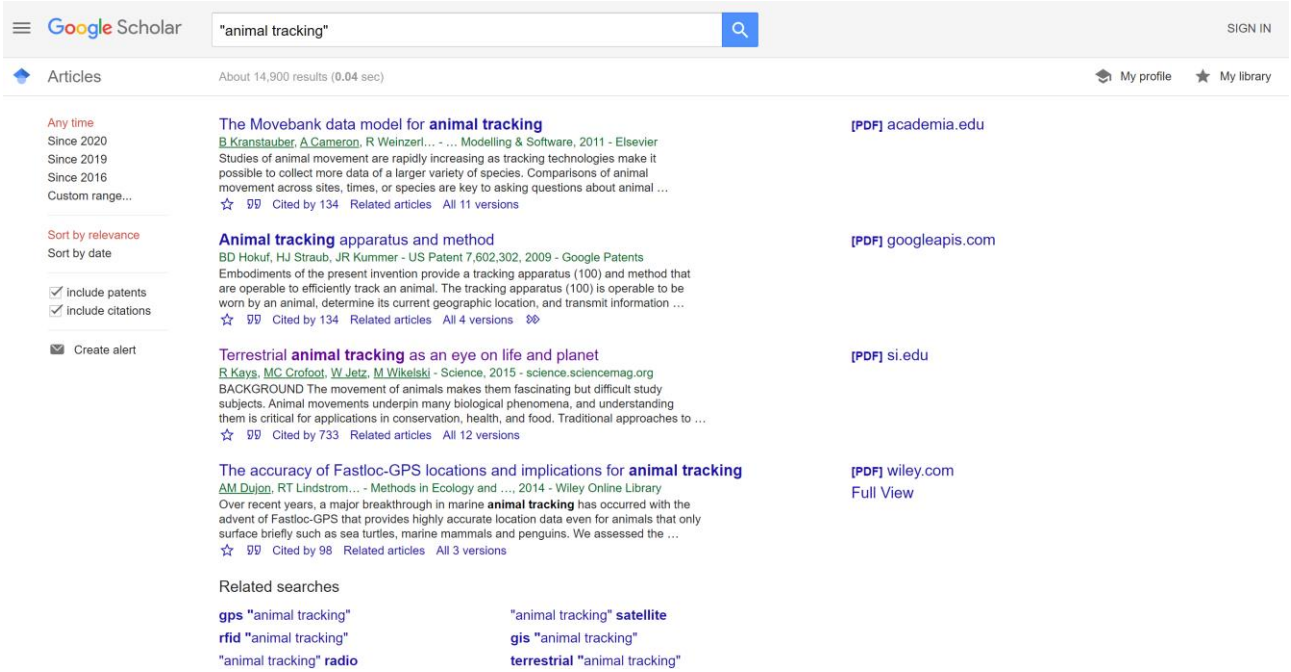
2. GOOGLE SCHOLAR Search Results

Source: https://scholar.google.com/scholar?q=%22animal+tracking%22&hl=en&as_sdt=0,5

Test case: From the initial interface, perform a search for: “animal tracking”

Test results page, including date filter (Any time, Since 2020, etc.) and sort by relevance and sort by date.

Find result “Terrestrial animal tracking as an eye on life and planet”. Test features underneath citation including, Cite, Cited by, Related articles, versions, Library Search.



Automated findings using Axe

1. **SC 2.4.4 A** – Several links on the results page are either very similar or identical in the link text, and do not have sufficient additional context to differentiate their unique purpose. E.g. “Cited by 134”, “Related articles”, “All X versions”, “[PDF] DOMAIN.com”, “Full View”, etc.
2. **SC 1.4.3 AA** – The results text (e.g. “About 14,900 results (0.04 sec)”) is low in contrast. #999999 against #FFFFFF results in 4.5:1 contrast.
3. **SC 1.4.3 AA** – The selected filter in the left hand filters column is low in contrast. #D14836 against #FFFFFF results in 4.47:1 contrast.

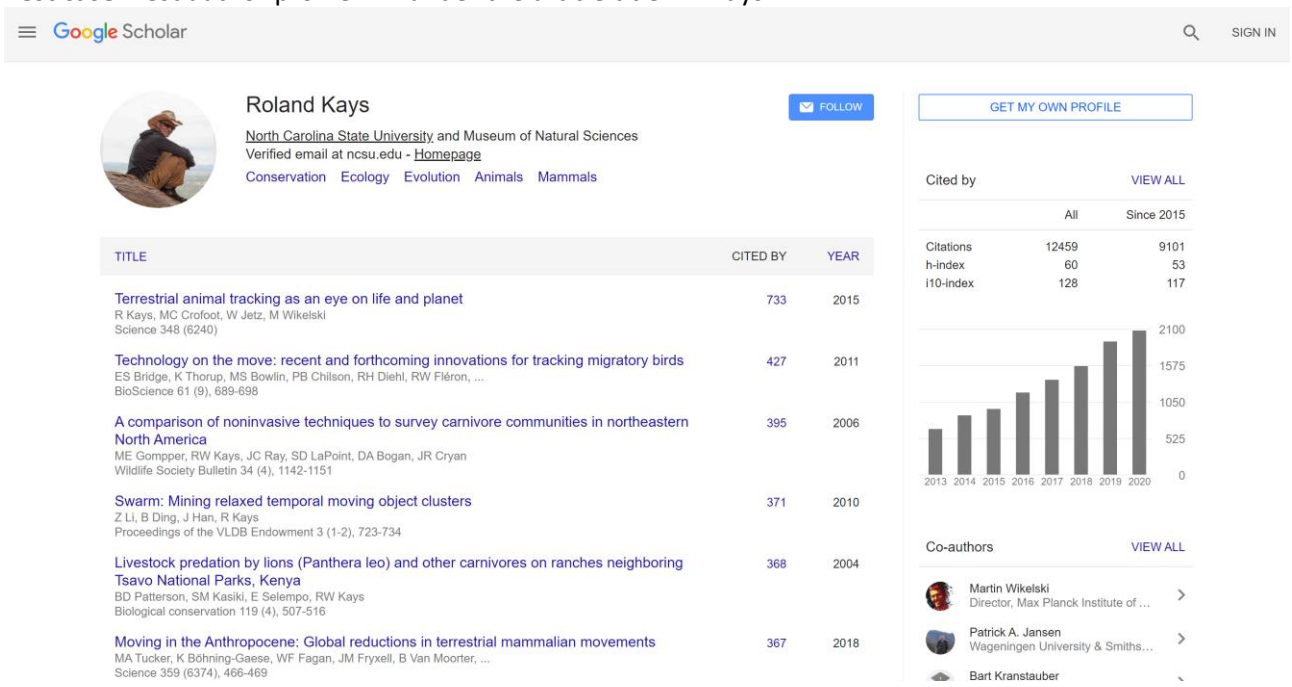
Additional manual findings using NVDA screen reader

1. **SC 1.4.10 AA** – When a reflow viewport of 320 CSS pixels wide is applied, the format and domain information is cut-off in the viewport. E.g. [PDF] academia.edu
2. **SC 4.1.2 A** – On the left filter column, the currently selected filter is missing a programmatic indication that it is the currently selected filter
3. **SC 2.4.4 A** – On the left filter column, the links for the individual filters are missing context for their purpose. A user is not clearly aware that it is a filter section or that the links are used to filter results
4. **SC 2.4.3 A** – When the Cite modal is closed, the user focus is not set back to the triggering element.
5. **SC 4.1.3 A** – When a user types a search term into the input field, the screen reader does not announce that there are auto-complete / auto-suggest options that can be navigated to.
6. **SC 1.4.11 AA** – When a user types a search term into the input field and navigates the options in the auto-complete / auto-suggest function, the focus indicator for the selected item is low in contrast. A focus indicator of #C6DAFC against an adjacent #FFFFFF results in 1.4:1 contrast. 3:1 is expected.

3. GOOGLE SCHOLAR Author Profile Link Page

Source: https://scholar.google.com/citations?user=Rd3MdDkAAAAJ&hl=en&oi=sra

Test case: Test author profile link under the article title: “R Kays”



Automated findings using Axe

1. **SC 4.1.2 A** – The links in the graph on the ‘Cited by’ table are missing accessible link text.
2. **SC 1.4.3 AA** – The light grey text that is used throughout the page is low in contrast. #777777 against #FFFFFF results in 4.47:1 contrast. The text is used in: the Cited by graph, the second line of items in Co-authors and the second and third lines of each item in the Title table column
3. **SC 1.4.3 AA** – The “Follow” element is low in contrast. #FFFFFF against #4D90FE results in 3.11:1 contrast

Additional manual findings using NVDA screen reader

1. **SC 1.3.1 A** – The author profile name (e.g. “Roland Kays”) acts as a section heading but is not marked up as one
2. **SC 2.4.3 A** – When ‘Show More’ is triggred, the focus is not immediately moved to the latest added content.
3. **SC 4.1.2 A** – In the ‘Titles’ table, the column heading cell that represents the current sort is visually but not programmatically identified
4. **SC 2.4.4 A** – In the ‘Titles’ table, the column heading links do not clearly indicate that they are meant to sort the data in the table below
5. **SC 1.3.2 A** – In the ‘Cited by’ graph, the year and # of cites text is read as mostly one large lump of text, this misrepresents the meaning of the graph text to AT users
6. **SC 1.1.1 A** – In the ‘Cited by’ graph, the meaning of the number of cites and the year axis is not clearly communicated to an AT user