

When using this dataset please use the following citation:

Atlas of Living Australia occurrence download at [https://biocache.ala.org.au/occurrences/search?q=text%3A%20Odonata%20AND%20occurrence_date%3A%5B1951-01-01T00%3A00%3A00Z%20TO%202021-01-29T00%3A00%3A00Z%5D&disableAllQualityFilters=true&fq=basis_of_record%3A%22HUMAN_OBSERVATION%22&fq=outlierLayerCount%3A%5B3%20TO%20%5D&fq=coordinateUncertaintyInMeters%3A%5B10001%20TO%20*%5D&fq=year%3A%5B*%20TO%201700%5D&fq=establishmentMeans%3A%22MANAGED%22%20AND%20-decimalLatitude%3A0%20AND%20-decimalLongitude%3A0%20AND%20-assertions%3A%22PRESUMED_SWAPPED_COORDINATE%22%20AND%20-assertions%3A%22COORDINATES_CENTRE_OF_STATEPROVINCE%22%20AND%20-assertions%3A%22COORDINATES_CENTRE_OF_COUNTRY%22%20AND%20-assertions%3A%22PRESUMED_NEGATED_LATITUDE%22%20AND%20-assertions%3A%22PRESUMED_NEGATED_LONGITUDE%22&fq=basisOfRecord%3A%22FOSSIL_SPECIMEN%22%20AND%20-%28basisOfRecord%3A%22MATERIAL_SAMPLE%22%20AND%20contentTypes%3A%22EnvironmentalDNA%22%29&fq=userAssertions%3A50001%20AND%20-userAssertions%3A50005&fq=occurrenceStatus%3AABSENT&fq=spatiallyValid%3A%22false%22&fq=assertions%3ATAXON_MATCH_NONE%20AND%20-assertions%3AINVALID_SCIENTIFIC_NAME%20AND%20-assertions%3ATAXON_HOMONYM%20AND%20-assertions%3AUNKNOWN_KINGDOM%20AND%20-assertions%3ATAXON_SCOPE_MISMATCH&fq=duplicateType%3A%22DIFFERENT_DATASET%22](https://biocache.ala.org.au/occurrences/search?q=text%3A%20Odonata%20AND%20occurrence_date%3A%5B1951-01-01T00%3A00%3A00Z%20TO%202021-01-29T00%3A00%3A00Z%5D&disableAllQualityFilters=true&fq=basis_of_record%3A%22HUMAN_OBSERVATION%22&fq=outlierLayerCount%3A%5B3%20TO%20*%5D&fq=coordinateUncertaintyInMeters%3A%5B10001%20TO%20*%5D&fq=year%3A%5B*%20TO%201700%5D&fq=establishmentMeans%3A%22MANAGED%22%20AND%20-decimalLatitude%3A0%20AND%20-decimalLongitude%3A0%20AND%20-assertions%3A%22PRESUMED_SWAPPED_COORDINATE%22%20AND%20-assertions%3A%22COORDINATES_CENTRE_OF_STATEPROVINCE%22%20AND%20-assertions%3A%22COORDINATES_CENTRE_OF_COUNTRY%22%20AND%20-assertions%3A%22PRESUMED_NEGATED_LATITUDE%22%20AND%20-assertions%3A%22PRESUMED_NEGATED_LONGITUDE%22&fq=basisOfRecord%3A%22FOSSIL_SPECIMEN%22%20AND%20-%28basisOfRecord%3A%22MATERIAL_SAMPLE%22%20AND%20contentTypes%3A%22EnvironmentalDNA%22%29&fq=userAssertions%3A50001%20AND%20-userAssertions%3A50005&fq=occurrenceStatus%3AABSENT&fq=spatiallyValid%3A%22false%22&fq=assertions%3ATAXON_MATCH_NONE%20AND%20-assertions%3AINVALID_SCIENTIFIC_NAME%20AND%20-assertions%3ATAXON_HOMONYM%20AND%20-assertions%3AUNKNOWN_KINGDOM%20AND%20-assertions%3ATAXON_SCOPE_MISMATCH&fq=duplicateType%3A%22DIFFERENT_DATASET%22) accessed on 24 March 2022.*

The DOI for this download is available at <https://doi.org/10.26197/ala.80f4ca89-4a2a-4925-a7d0-fe308a707006>

Data contributed by the following providers:

- Records provided by Department of Planning, Industry and Environment representing the State of New South Wales, accessed through ALA website. (). For more information: <https://collections.ala.org.au/public/show/dp34>
- Records provided by South Australia, Department for Environment and Water, accessed through ALA website. (). For more information: <https://collections.ala.org.au/public/show/dp32>
- Records provided by Citizen Science - ALA Website, accessed through ALA website. (). For more information: <https://collections.ala.org.au/public/show/dp31>
- Records provided by Northern Territory Department of Environment and Natural Resources, accessed through ALA website. (). For more information: <https://collections.ala.org.au/public/show/dp30>
- Records provided by Questagame, accessed through ALA website. (). For more information: <https://collections.ala.org.au/public/show/dp52>
- Data Source: 'Victorian Biodiversity Atlas', (c) The State of Victoria, Department of Environment, Land, Water & Planning (published [month, year]). (Creative Commons Attribution-Noncommercial (International) (CC-BY-NC 4.0 (Int)) Copyright in the data and materials resides with the copyright owners as indicated next to the detailed records. In any reproduction, distribution or publication of the data, or in any use or adaptation of the data to create derivative works, the user must include a citation which attributes the source of the data and the date the data was published, as follows: Data Source: 'Victorian Biodiversity Atlas', © The State of Victoria, Department of Environment and Primary Industries (published [month, year]).). For more information: <https://collections.ala.org.au/public/show/dr1097>
- Australian River Assessment System. NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/> (Creative Commons Attribution (International) (CC-BY 4.0 (Int)) Conditions of Access All users need to acknowledge and agree to the following conditions before using NatureMap content: Data within NatureMap is provided with the participation and good will of data custodians and I will endeavour, where possible, to seek a collaborative approach with custodians in any research or papers published using NatureMap data. Re-sale of raw data or the commercial use of images or descriptive text (other than generated maps, species lists and reports) on this site is unauthorised unless written permission is obtained from the Department of Environment and Conservation (DEC). Appropriate and full acknowledgement of DEC and species data custodians (see Data Directory) must always be given in any publication that includes data sourced here. Data provided through NatureMap represents positive records of flora and fauna occurrence. The absence of a record should not be taken to mean flora or fauna is necessarily absent from an area. (To minimise the effect of data gaps, a buffer area should be applied that is reflective of the likelihood of surveys or collections having been undertaken in the target area.) My username and password will not be passed on to any other person or organisation. DEC and data custodians reserve the right to revoke registration if the above conditions of access are not complied with. I will notify DEC if any relevant conditions change that might affect my NatureMap authorisation level. Also note: Custodians have kindly granted permission to allow relatively large subsets of data to be downloaded for a wide range of uses, including within a commercial context. Note, however, it is not NatureMap policy to allow the downloading of entire datasets It is current custodian policy to only grant Advanced Access (see the Registration page) for bona fide research or conservation planning purposes. This does not extend to use within a commercial context. While this may appear restrictive, in fact basic registration provides a great deal of information on both conservation and non-

conservation taxa, and all users are encouraged to explore NatureMap's sophisticated querying and mapping capabilities. DEC's Species and Communities Branch continues to provide information on detailed localities of conservation taxa to consultants and other commercial users on a fee-for-service basis. Fair Use Guidelines As stated above, we want as many people as possible to make use of the data available within NatureMap, so long as that use is "fair". It is considered fair for anyone to use information from NatureMap for conservation or planning purposes, including incorporating that information into reports or papers, or summarising and value-adding to data. It is not considered fair use to download raw data and on-sell it. That would contravene copyright. It is also bad business, because anyone could obtain the same data directly from NatureMap. Of particular note: Maps, species lists, reports and raw data may be freely used by anyone, including commercial consultants, for research, planning, generating reports and compilations, or for personal use, so long as the above conditions of access are complied with. Raw data, i.e. bulk detail records of individual locations that have been downloaded from NatureMap and not summarised, compiled or modified in any substantial way, may not be on-sold or rebadged without written permission from the Department of Environment and Conservation (DEC). This is consistent with Australian Copyright law. Other descriptive text and images, such as Thematic content on wetlands or ecological attributes, remain the property of NatureMap and copyright holders and may not be used without written permission from DEC. For full terms of use see Copyright page at <http://naturemap.dec.wa.gov.au/default.aspx>. For more information: <https://collections.ala.org.au/public/show/dr7732>

- © Crown in right of the State of South Australia, Department of Environment, Water and Natural Resources. (Creative Commons Attribution (International) (CC-BY 4.0 (Int))). For more information: <https://collections.ala.org.au/public/show/dr365>
- BioNet Species Sightings occurrence data held by the NSW Office of Environment and Heritage (OEH). The BioNet repository holds data from a number of sources and custodians. (Accessed through ALA Data Portal). (Creative Commons Attribution (International) (CC-BY 4.0 (Int))). For more information: <https://collections.ala.org.au/public/show/dr368>
- iNaturalist.org: iNaturalist Research-grade Observations. doi:10.15468/ab3s5x Accessed via <http://www.gbif.org/dataset/50c9509d-22c7-4a22-a47d-8c48425ef4a7> on 2017-03-16 (CC-BY-NC-Int). For more information: <https://collections.ala.org.au/public/show/dr1411>
- Natural Diversity Recovery Catchments - Invertebrates. NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/> (Creative Commons Attribution (International) (CC-BY 4.0 (Int)) Conditions of Access All users need to acknowledge and agree to the following conditions before using NatureMap content: Data within NatureMap is provided with the participation and good will of data custodians and I will endeavour, where possible, to seek a collaborative approach with custodians in any research or papers published using NatureMap data. Re-sale of raw data or the commercial use of images or descriptive text (other than generated maps, species lists and reports) on this site is unauthorised unless written permission is obtained from the Department of Environment and Conservation (DEC). Appropriate and full acknowledgement of DEC and species data custodians (see Data Directory) must always be given in any publication that includes data sourced here. Data provided through NatureMap represents positive records of flora and fauna occurrence. The absence of a record should not be taken to mean flora or fauna is necessarily absent from an area. (To minimise the effect of data gaps, a buffer area should be applied that is reflective of the likelihood of surveys or collections having been undertaken in the target area.) My username and password will not be passed on to any other person or organisation. DEC and data custodians reserve the right to revoke registration if the above conditions of access are not complied with. I will notify DEC if any relevant conditions change that might affect my NatureMap authorisation level. Also note: Custodians have kindly granted permission to allow relatively large subsets of data to be downloaded for a wide range of uses, including within a commercial context. Note, however, it is not NatureMap policy to allow the downloading of entire datasets It is current custodian policy to only grant Advanced Access (see the Registration page) for bona fide research or conservation planning purposes. This does not extend to use within a commercial context. While this may appear restrictive, in fact basic registration provides a great deal of information on both conservation and non-conservation taxa, and all users are encouraged to explore NatureMap's sophisticated querying and mapping capabilities. DEC's Species and Communities Branch continues to provide information on detailed localities of conservation taxa to consultants and other commercial users on a fee-for-service basis. Fair Use Guidelines As stated above, we want as many people as possible to make use of the data available within NatureMap, so long as that use is "fair". It is considered fair for anyone to use information from NatureMap for conservation or planning purposes, including incorporating that information into reports or papers, or summarising and value-adding to data. It is not considered fair use to download raw data and on-sell it. That would contravene copyright. It is also bad business, because anyone could obtain the same data directly from NatureMap. Of particular note: Maps, species lists, reports and raw data may be freely used by anyone, including commercial consultants, for research, planning, generating reports and compilations, or for personal use, so long as the above conditions of access are complied with. Raw data, i.e. bulk detail records of individual locations that have been downloaded from NatureMap and not summarised, compiled or modified in any substantial way, may not be on-sold or rebadged without written permission from the Department of Environment and Conservation (DEC). This is consistent with Australian Copyright law. Other descriptive text and images, such as Thematic content on wetlands or ecological attributes, remain the property of NatureMap and copyright holders and may not be used without written permission from DEC. For full terms of use see Copyright page at

- <http://naturemap.dec.wa.gov.au/default.aspx>). For more information:
<https://collections.ala.org.au/public/show/dr7812>
- Data supplied by Dept. Natural Resources, Environment, The Arts and Sport. Northern Territory of Australia (Creative Commons Attribution (Australia) (CC-BY 3.0 (Au)) Data supplied is licensed under the Creative Commons Attribution 3.0 Australia License.). For more information:
<https://collections.ala.org.au/public/show/dr361>
 - Charles Darwin University (Creative Commons Attribution (International) (CC-BY 4.0 (Int)) Charles Darwin University). For more information: <https://collections.ala.org.au/public/show/dr7978>
 - Individual sighting: Atlas of Living Australia (2021) Individual sighting dataset Test sighting: Atlas of Living Australia (2021) Test sighting dataset (CC-BY). For more information:
<https://collections.ala.org.au/public/show/dr364>
 - Laura Levens (CC-BY). For more information: <https://collections.ala.org.au/public/show/dr703>
 - Records provided by NatureMap, accessed through ALA website. (). For more information:
<https://collections.ala.org.au/public/show/dp46>
 - Records provided by Woodlark Mining Ltd, accessed through ALA website. (Creative Commons Attribution-Noncommercial (International) (CC-BY-NC 4.0 (Int)) Creative Commons Attribution-Noncommercial (International) (CC-BY-NC 4.0 (Int) 4.0)). For more information:
<https://collections.ala.org.au/public/show/dr18302>
 - Fons Peels, DragonflyPix.com (CC-BY Fons Peels). For more information:
<https://collections.ala.org.au/public/show/dr6435>
 - Michael Barkla (CC-BY Michael Barkla). For more information: <https://collections.ala.org.au/public/show/dr4635>
 - Macro-invertebrate sampling Wingecarribee Shire Council (Creative Commons Attribution (International) (CC-BY 4.0 (Int))). For more information: <https://collections.ala.org.au/public/show/dr7949>
 - Avon Baseline - Invertebrates. NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/> (Creative Commons Attribution (International) (CC-BY 4.0 (Int)) Conditions of Access All users need to acknowledge and agree to the following conditions before using NatureMap content: Data within NatureMap is provided with the participation and good will of data custodians and I will endeavour, where possible, to seek a collaborative approach with custodians in any research or papers published using NatureMap data. Re-sale of raw data or the commercial use of images or descriptive text (other than generated maps, species lists and reports) on this site is unauthorised unless written permission is obtained from the Department of Environment and Conservation (DEC). Appropriate and full acknowledgement of DEC and species data custodians (see Data Directory) must always be given in any publication that includes data sourced here. Data provided through NatureMap represents positive records of flora and fauna occurrence. The absence of a record should not be taken to mean flora or fauna is necessarily absent from an area. (To minimise the effect of data gaps, a buffer area should be applied that is reflective of the likelihood of surveys or collections having been undertaken in the target area.) My username and password will not be passed on to any other person or organisation. DEC and data custodians reserve the right to revoke registration if the above conditions of access are not complied with. I will notify DEC if any relevant conditions change that might affect my NatureMap authorisation level. Also note: Custodians have kindly granted permission to allow relatively large subsets of data to be downloaded for a wide range of uses, including within a commercial context. Note, however, it is not NatureMap policy to allow the downloading of entire datasets It is current custodian policy to only grant Advanced Access (see the Registration page) for bona fide research or conservation planning purposes. This does not extend to use within a commercial context. While this may appear restrictive, in fact basic registration provides a great deal of information on both conservation and non-conservation taxa, and all users are encouraged to explore NatureMap's sophisticated querying and mapping capabilities. DEC's Species and Communities Branch continues to provide information on detailed localities of conservation taxa to consultants and other commercial users on a fee-for-service basis. Fair Use Guidelines As stated above, we want as many people as possible to make use of the data available within NatureMap, so long as that use is "fair". It is considered fair for anyone to use information from NatureMap for conservation or planning purposes, including incorporating that information into reports or papers, or summarising and value-adding to data. It is not considered fair use to download raw data and on-sell it. That would contravene copyright. It is also bad business, because anyone could obtain the same data directly from NatureMap. Of particular note: Maps, species lists, reports and raw data may be freely used by anyone, including commercial consultants, for research, planning, generating reports and compilations, or for personal use, so long as the above conditions of access are complied with. Raw data, i.e. bulk detail records of individual locations that have been downloaded from NatureMap and not summarised, compiled or modified in any substantial way, may not be on-sold or rebadged without written permission from the Department of Environment and Conservation (DEC). This is consistent with Australian Copyright law. Other descriptive text and images, such as Thematic content on wetlands or ecological attributes, remain the property of NatureMap and copyright holders and may not be used without written permission from DEC. For full terms of use see Copyright page at <http://naturemap.dec.wa.gov.au/default.aspx>). For more information:
<https://collections.ala.org.au/public/show/dr7807>
 - Reiner Richter (Odonata), 2 August 2015 (CC-BY © 2015 Reiner Richter This database of sightings is provided under the following license: "Creative Commons Attribution 3.0 Australia (CC BY)"

<http://creativecommons.org/licenses/by/3.0/au/> It may be cited as: Reiner Richter (Odonata), 2 August 2015).
For more information: <https://collections.ala.org.au/public/show/dr692>

- ForestCheck Invertebrates. NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/> (Creative Commons Attribution (International) (CC-BY 4.0 (Int)) Conditions of Access All users need to acknowledge and agree to the following conditions before using NatureMap content: Data within NatureMap is provided with the participation and good will of data custodians and I will endeavour, where possible, to seek a collaborative approach with custodians in any research or papers published using NatureMap data. Re-sale of raw data or the commercial use of images or descriptive text (other than generated maps, species lists and reports) on this site is unauthorised unless written permission is obtained from the Department of Environment and Conservation (DEC). Appropriate and full acknowledgement of DEC and species data custodians (see Data Directory) must always be given in any publication that includes data sourced here. Data provided through NatureMap represents positive records of flora and fauna occurrence. The absence of a record should not be taken to mean flora or fauna is necessarily absent from an area. (To minimise the effect of data gaps, a buffer area should be applied that is reflective of the likelihood of surveys or collections having been undertaken in the target area.) My username and password will not be passed on to any other person or organisation. DEC and data custodians reserve the right to revoke registration if the above conditions of access are not complied with. I will notify DEC if any relevant conditions change that might affect my NatureMap authorisation level. Also note: Custodians have kindly granted permission to allow relatively large subsets of data to be downloaded for a wide range of uses, including within a commercial context. Note, however, it is not NatureMap policy to allow the downloading of entire datasets It is current custodian policy to only grant Advanced Access (see the Registration page) for bona fide research or conservation planning purposes. This does not extend to use within a commercial context. While this may appear restrictive, in fact basic registration provides a great deal of information on both conservation and non-conservation taxa, and all users are encouraged to explore NatureMap's sophisticated querying and mapping capabilities. DEC's Species and Communities Branch continues to provide information on detailed localities of conservation taxa to consultants and other commercial users on a fee-for-service basis. Fair Use Guidelines As stated above, we want as many people as possible to make use of the data available within NatureMap, so long as that use is "fair". It is considered fair for anyone to use information from NatureMap for conservation or planning purposes, including incorporating that information into reports or papers, or summarising and value-adding to data. It is not considered fair use to download raw data and on-sell it. That would contravene copyright. It is also bad business, because anyone could obtain the same data directly from NatureMap. Of particular note: Maps, species lists, reports and raw data may be freely used by anyone, including commercial consultants, for research, planning, generating reports and compilations, or for personal use, so long as the above conditions of access are complied with. Raw data, i.e. bulk detail records of individual locations that have been downloaded from NatureMap and not summarised, compiled or modified in any substantial way, may not be on-sold or rebadged without written permission from the Department of Environment and Conservation (DEC). This is consistent with Australian Copyright law. Other descriptive text and images, such as Thematic content on wetlands or ecological attributes, remain the property of NatureMap and copyright holders and may not be used without written permission from DEC. For full terms of use see Copyright page at <http://naturemap.dec.wa.gov.au/default.aspx>). For more information: <https://collections.ala.org.au/public/show/dr793>
- Records provided by Earth Guardians Weekly Feed, accessed through ALA website. (Creative Commons Attribution-Noncommercial (International) (CC-BY-NC 4.0 (Int))). For more information: <https://collections.ala.org.au/public/show/dr1902>
- Carnarvon Basin (Aquatic Projects) - Invertebrates. NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/> (Creative Commons Attribution (International) (CC-BY 4.0 (Int)) Conditions of Access All users need to acknowledge and agree to the following conditions before using NatureMap content: Data within NatureMap is provided with the participation and good will of data custodians and I will endeavour, where possible, to seek a collaborative approach with custodians in any research or papers published using NatureMap data. Re-sale of raw data or the commercial use of images or descriptive text (other than generated maps, species lists and reports) on this site is unauthorised unless written permission is obtained from the Department of Environment and Conservation (DEC). Appropriate and full acknowledgement of DEC and species data custodians (see Data Directory) must always be given in any publication that includes data sourced here. Data provided through NatureMap represents positive records of flora and fauna occurrence. The absence of a record should not be taken to mean flora or fauna is necessarily absent from an area. (To minimise the effect of data gaps, a buffer area should be applied that is reflective of the likelihood of surveys or collections having been undertaken in the target area.) My username and password will not be passed on to any other person or organisation. DEC and data custodians reserve the right to revoke registration if the above conditions of access are not complied with. I will notify DEC if any relevant conditions change that might affect my NatureMap authorisation level. Also note: Custodians have kindly granted permission to allow relatively large subsets of data to be downloaded for a wide range of uses, including within a commercial context. Note, however, it is not NatureMap policy to allow the downloading of entire datasets It is current custodian policy to only grant Advanced Access (see the Registration page) for bona fide research or conservation planning purposes. This does not extend to use within a commercial context. While this may appear restrictive, in fact basic registration provides a great deal of information on both conservation and non-conservation taxa, and all users are encouraged to explore NatureMap's sophisticated querying and

mapping capabilities. DEC's Species and Communities Branch continues to provide information on detailed localities of conservation taxa to consultants and other commercial users on a fee-for-service basis. Fair Use Guidelines As stated above, we want as many people as possible to make use of the data available within NatureMap, so long as that use is "fair". It is considered fair for anyone to use information from NatureMap for conservation or planning purposes, including incorporating that information into reports or papers, or summarising and value-adding to data. It is not considered fair use to download raw data and on-sell it. That would contravene copyright. It is also bad business, because anyone could obtain the same data directly from NatureMap. Of particular note: Maps, species lists, reports and raw data may be freely used by anyone, including commercial consultants, for research, planning, generating reports and compilations, or for personal use, so long as the above conditions of access are complied with. Raw data, i.e. bulk detail records of individual locations that have been downloaded from NatureMap and not summarised, compiled or modified in any substantial way, may not be on-sold or rebadged without written permission from the Department of Environment and Conservation (DEC). This is consistent with Australian Copyright law. Other descriptive text and images, such as Thematic content on wetlands or ecological attributes, remain the property of NatureMap and copyright holders and may not be used without written permission from DEC. For full terms of use see Copyright page at <http://naturemap.dec.wa.gov.au/default.aspx>. For more information: <https://collections.ala.org.au/public/show/dr7809>

- Records provided by NatureShare, accessed through ALA website. (CC-BY Images are CC-BY 2.5, Data is CC-BY-NC 3.0.). For more information: <https://collections.ala.org.au/public/show/dr635>

More information can be found at [citing the ALA](#).

For more information about the fields that are being downloaded please consult [Download Fields](#).