

AKN-1.0-COVAR SPAT Data Service

The data retrieval URL, a find request, provides access to COVAR_SPAT and COVAR_FRAGSTAT layer data via latitude/longitude parameters, or a global unique identifier parameter for a single observation record. The find request will accept parameters to query for a single COVAR layer value, all layers in a specific COVAR table, or all layer values in the COVAR schema for a particular lat/lon or GlobalUniqueID. A find request will also accept a format parameter that specifies a response data format of XML or CSV.

Note: Currently, use of the GlobalUniqueID parameter is restricted to public data records only.

API Parameters

Find Request

URL	Description	Status	Notes
/ws1.0/data/covar/find?decLon=<lon>&decLat=<lat>&format=xml	Returns all COVAR_SPAT and COVAR_FRAGSTAT layer values for lat/lon in XML format	Deployed	
/ws1.0/data/covar/find?guid=<guidValue>	Returns all COVAR_SPAT and COVAR_FRAGSTAT layer values for guidValue in CSV format	Deployed	Currently only available for public AKN records
/ws1.0/data/covar/find?guid=<guidValue>&table=<tableName>	Returns all layer values in the tableName table for guidValue in CSV format	Deployed	
/ws1.0/data/covar/find?decLon=<lon>&decLat=<lat>&format=xml&table=<tableName>&layer=<layerName>	Returns the layerName value in the tableName table for lat/lon in XML format	Deployed	

Parameter	Required	Default	Values	Example	Description
decLat & decLon	Required unless guid parameter is passed.		Any valid AKN decimal latitude and decimal longitude value	decLon=-123.0766368&decLat=44.0430722	
guid	Required unless decLat & decLon parameters are passed.		Any valid AKN Global Unique Identifier	guid=URN:catalog:HMANA:HawkCount:1476880	
table	Required if layer parameter is passed. Required if data values for an entire table are desired.		Any valid AKN COVAR table name	table=covar_spat_caus	
layer	no		Any valid AKN COVAR layer name	layer=caus_prec0101	
format	no	csv	"xml" or "csv"	format=xml	Format specification for data response

Example URLs

Deployed URLs	Expected Response
http://ebird.org/ws1.0/data/covar/find?decLon=-123.0766368&decLat=44.0430722&format=xml	The entire list of active COVAR layers in XML format for decimal latitude = 44.0430722, decimal longitude = -123.0766368 in XML format
http://ebird.org/ws1.0/data/covar/find?decLon=-123.0766368&decLat=44.0430722&format=xml&table=covar_spat_caus	The entire list of active layers in the COVAR_SPAT_CAUS table for decimal latitude = 44.0430722, decimal longitude = -123.0766368 in XML format
http://ebird.org/ws1.0/data/covar/find?table=covar_fs_class_nlcd2001&layer=pland&decLon=-123.0766368&decLat=44.0430722&format=xml	The PLAND Fragstat values for decimal latitude = 44.0430722, decimal longitude = -123.0766368 in XML format
http://ebird.org/ws1.0/data/covar/find?table=covar_fs_landscape_nlcd2001&guid=URN:catalog:HMANA:HawkCount:1476880	All of the values in the COVAR_FS_LANDSCAPE_NLCD2001 table for the GlobalUniqueID = URN:catalog:HMANA:HawkCount:1476880 in CSV format

XML Result Formats

Responses to a well-formed find request

Example Value	Description
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<pre> <?xml version="1.0" encoding=" UTF-8"?> <!DOCTYPE response PUBLIC "/Avian Knowledge Network //DTD COVAR_SPAT 1.0/EN" "http://akn.ornith.cornell.edu/dtd /covar_spat_1_0.dtd"> <response> <header> <locale country="US" language=" en"/> <timestamp>2009-05-06T07:31: 23.017-04:00</timestamp> <criteria> <copyright>Copyright 2009 Cornell Lab of Ornithology - http:// www.birds.cornell.edu< /copyright> <data-policy>AKN Data Sharing Policy - http://www. avianknowledge.net/content /about/akn-data-sharing-policy< /data-policy> <comment>COVAR_SPAT data response for PLAND< /comment> </header> <result> <covar-spat global-unique- ident="URN:catalog:HMANA: HawkCount:1476880" decimal- latitude="42.0666667" decimal- longitude="-83.1936944"> <covar-fragstat-class> <data-record> <attribute-data> <field-name>RADIUS</field- name> <field-value>75</field-value> </attribute-data> <attribute-data> <field-name>CLASS</field- name> <field-value>21</field-value> </attribute-data> <attribute-data> <field-name>PLAND</field- name> <field-value>84</field-value> </attribute-data> </data-record> <data-record> <attribute-data> <field-name>RADIUS</field- name> <field-value>75</field-value> </attribute-data> <attribute-data> <field-name>CLASS</field- name> <field-value>23</field-value> </attribute-data> <attribute-data> <field-name>PLAND</field- name> <field-value>16</field-value> </attribute-data> </data-record> ... </covar-fragstat-class> </covar-spat> </result> </response> </pre>	<p>Header information includes the AKN COVAR_SPAT DTD</p> <p>The timestamp of the response</p> <p>A copyright element</p> <p>The AKN data sharing policy element</p> <p>A comment element</p> <p>The <covar-spat> element will contain decimal_latitude and decimal_longitude attributes from the request parameters, as well as a global-unique-ident attribute if the data request was based on a GlobalUniqueID.</p> <p>The data listing is a series of <tableName> elements containing <data-record> elements. (Each <tableName> element identifies the name of the particular source table from which the data was pulled.) The <data-record> element contains 1 <attribute-data> element if the request was for a specific layer value, and N <attribute-data> elements if the request was for the contents of the entire table. The <attribute-data> contains the <field-name>, and <field-value> elements. If the <field-value> is a data range, i.e. precipitation and some temperature attributes are expressed as a range, the <attribute-data> will include a <field-value-description> element containing the actual data range string for the value (See the discussion about data range in the /ws1.0/ref/covar/metadata request.)</p> <p>Reference DTD for XML schema details http://akn.ornith.cornell.edu/dtd/covar_spat_1_0.dtd</p>
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Response to a mal-formed find request

Example Value	Description
<pre> <?xml version="1.0" encoding="UTF-8"?> <!DOCTYPE response PUBLIC "/Avian Knowledge Network//DTD COVAR_SPAT 1.0/EN" "http://akn. ornith.cornell.edu/dtd/covar_spat_1_0.dtd"> <response> <header> <locale country="US" language="en"/> <timestamp>2009-05-08T07:38:51.347-04:00</timestamp> <criteria> <copyright>Copyright 2009 Cornell Lab of Ornithology - http://www.birds.cornell.edu</copyright> <data-policy>AKN Data Sharing Policy - http://www.avianknowledge.net/content/about/akn-data- sharing-policy</data-policy> <comment>Malformed Request. Request must include a global unique identifier or lat/lon parameters.< /comment> </header> <result/> </response> </pre>	<p>Header information includes the AKN COVAR_SPAT DTD</p> <p>The timestamp of the response</p> <p>A copyright element</p> <p>The AKN data sharing policy element</p> <p>A comment element</p> <p>The comment states that required parameters were missing or empty.</p> <p>Reference DTD for XML schema details http://akn.ornith.cornell.edu/dtd/covar_spat_1_0.dtd</p>

CSV Result Formats

Response to a well-formed find request

Description	Name	Line Number	Format	Example Value
Status	Status	1	Text terminated by a newline	DATA
Header	Copyright	2	Text terminated by a newline	Copyright 2009 Cornell Lab of Ornithology http://www.birds.cornell.edu
	Data Policy	3	Text terminated by a newline	AKN Data Sharing Policy http://www.avianknowledge.net/content/about/akn-data-sharing-policy
	Request Parameters	4	Text terminated by a newline	REQUEST PARAMETERS=decLon=-123.0766368&decLat=44.0430722&format=csv
	Number of records returned	5	Text terminated by a newline	RECORD COUNT=536
Separator	Blank Line	6	newline	
Field Listing	Field Listing	7	Comma separated text terminated by a newline	FIELD NAME, FIELD VALUE, FIELD VALUE DESCRIPTION, RADIUS, CLASS
Field data	Field data	8 to end of data	Comma separated text terminated by a newline	CAUS_PREC0101, 7, G 5.01 - 10.00, , CAUS_PREC0102, 6, F 3.01 - 5.00, , CAUS_PREC0103, 6, F 3.01 - 5.00, , ... PLAND, 68, , 75, 22 PD, 44.4444, , 75, 22 ED, 160, , 75, 22 ...

Response to a mal-formed find request

Description	Name	Line Number	Format	Example Value
Status	Status	1	Text terminated by a newline	ERROR
Header	Request Parameters	2	Text terminated by a newline	REQUEST PARAMETERS=decLon=-123.0766368
	Errors	3 - N	Text terminated by a newline	Malformed request. Request must include a global unique identifier or lat/lon parameters.
Separator	Blank Line	N + 1	newline	