

General Schema is not up to date, but example of queries should be good

All queries frontend needs that I know of should be available now, if anything is missing hmu on groupme

- Will be fixing the returned values since some is still finicky, but format of query and returned result should stay the same.

Last Updated: 12/12/2020 8:39AM EST

- Add getPredatorOfSources

Last Updated: 11/9/2020 4:46PM EST

- Renamed getDatabaseStats to getAvianTableStats
 - New field in result, **last_updated (when the database/avian table was last updated)**
 - Defaults to "N/A" if no info found
- Renamed getNumRecordsAndStudies to **getNumRecordsAndStudiesPred**
- Add **getNumRecordsAndStudiesPrey**
- Removed getRegionsPred and created a combined **getFilterValuesPred**
 - Also contains valid **startYears** and **endYears**
- Add **getFilterValuesPrey**

Previous Updated: 11/6/2020 4:42PM EST

- Remove getFiltersPred query
- Add getDatabaseStats query

Previous Updated: 10/29/2020 4:51PM EST

- Remove "preyLevel" argument from getPredatorOf query

Previous Updated: 10/21/2020 5:45PM EST

- getRecordsPerDecade now has same arguments as getPreyOf

Previous Updated: 10/20/2020 10:03AM EST

- Add getMapData query. I'm assuming the map also updates with filter so I included respective parameters. Region is not guaranteed to be one of the 50 states.

Previous Updated: 10/19/2020 10:47PM EST

- getRecordsPerSeason and getRecordsPerDietType now has same arguments as getPreyOf, other than preyLevel (can still be sent since i'm reusing arg for getPreyOf, but will not be used for anything)

Previous Updated: 10/14/2020 3:15PM EST

- Add getPredatorOf query

Previous Updated: 10/12/2020 4:48PM EST

- Add "all" argument for season, region, diet_type
 - getPreyOf season, region, diet_type defaults to "all" if no argument specified
- getPreyOf does not return bird if selected diet_type is null
- Add getRecordsPerDecade, getRecordsPerDietType

Previous Updated: 10/11/2020 6:48PM EST

- Combined getNumRecords and getNumStudies to getNumRecordsAndStudies

Previous Update: 10/11/2020 3:00PM EST

- Change getAutocomplete query to getAutocompletePred
- Add getAutocompletePrey query
- Change fields of getRecordsPerSeason from "season", "count" to "x", "y" respectively
- Add getRegionsPred query

General Schema

directive @specifiedBy(url: String!) on SCALAR

```
type AvianTableStats {  
  numSpecies: String!  
  numStudies: String!  
  numRecords: String!  
  lastUpdated: String!  
}
```

```
type FilterValues {  
  regions: [String!]!  
  startYears: [String!]!  
  endYears: [String!]!  
}
```

```
type graphXY {
```

```
x: String!  
y: Float!  
}
```

```
type Predator {  
  common_name: String!  
  family: String!  
  diet_type: String!  
  fraction_diet: String!  
  number_of_studies: String!  
}
```

```
type Prey {  
  taxon: String!  
  items: String  
  wt_or_vol: String  
  occurrence: String  
  unspecified: String  
}
```

```
type regionCountTuple {  
  region: String  
  count: Float  
}
```

```
type StudiesAndRecordsCount {  
  studies: String!  
  records: String!  
}
```

```
type Query {  
  getAvianTableStats: AvianTableStats!  
  getPreyOf(  
    predatorName: String!  
    preyLevel: String = "order"  
    dietType: String = "all"  
    startYear: String  
    endYear: String  
    season: String = "all"  
    region: String = "all"  
  ): [Prey]!  
  getPreyOfSources(  
    predatorName: String!  
    preyLevel: String = "order"
```

```

    dietType: String = "all"
    startYear: String
    endYear: String
    season: String = "all"
    region: String = "all"
  ): [String!]!
  getAutocompletePred(input: String!): [String!]!
  getNumRecordsAndStudiesPred(name: String!): StudiesAndRecordsCount!
  getRecordsPerSeason(
    predatorName: String!
    preyLevel: String = "order"
    dietType: String = "all"
    startYear: String
    endYear: String
    season: String = "all"
    region: String = "all"
  ): [graphXY!]!
  getRecordsPerDecade(
    predatorName: String!
    preyLevel: String = "order"
    dietType: String = "all"
    startYear: String
    endYear: String
    season: String = "all"
    region: String = "all"
  ): [graphXY!]!
  getRecordsPerDietType(
    predatorName: String!
    preyLevel: String = "order"
    dietType: String = "all"
    startYear: String
    endYear: String
    season: String = "all"
    region: String = "all"
  ): [graphXY!]!
  getFilterValuesPred(name: String!): FilterValues!
  getMapData(
    predatorName: String!
    preyLevel: String = "order"
    dietType: String = "all"
    startYear: String
    endYear: String
    season: String = "all"
    region: String = "all"
  ): [graphXY!]!

```

```

): [regionCountTuple!]!
getPredatorOf(
  preyName: String!
  preyStage: String = "any"
  dietType: String = "all"
  startYear: String
  endYear: String
  season: String = "all"
  region: String = "all"
): [Predator!]!
getAutocompletePrey(input: String!): [String!]!
getFilterValuesPrey(name: String!): FilterValues!
getNumRecordsAndStudiesPrey(name: String!): StudiesAndRecordsCount!
}

```

getAvianTableStats

Example Query

```

query {
  getAvianTableStats {
    numSpecies
    numStudies
    numRecords
    lastUpdated
  }
}

```

Example Output

```

{
  "data": {
    "getAvianTableStats": {
      "numSpecies": "618",
      "numStudies": "884",
      "numRecords": "66260",
      "lastUpdated": "November 13, 2020 00:48:15 UTC"
    }
  }
}

```

getPreyOf

Valid Inputs

[REQ] predatorName = anything

[DEFAULT = order] preyLevel = { kingdom, phylum, class, order, suborder, family, genus, scientific_name }

[DEFAULT = all] dietType = { all, wt_or_vol, items, occurrence, unspecified }

[OPT] startYear = format of YYYY

[OPT] endYear = format of YYYY

[DEFAULT = "all"] season = { all, summer, spring, fall, winter, multiple, unspecified }

[DEFAULT = "all"] region = Will be provided in getRegionsPred query, "all"

Example Query

```
query(  
  $name: String!  
  $level: String  
  $metrics: String  
  $startYear: String  
  $endYear: String  
  $seasons: String  
  $region: String  
) {  
  getPreyOf(  
    predatorName: $name  
    preyLevel: $level  
    dietType: $metrics  
    startYear: $startYear  
    endYear: $endYear  
    season: $seasons  
    region: $region  
  ) {  
    taxon  
    items  
    wt_or_vol  
    occurrence  
    unspecified  
  }  
}
```

VARIABLES

```
{  
  "endYear": "2020",
```

```
    "level": "order",
    "name": "Bald Eagle",
    "region": "Mexico",
    "seasons": "summer",
    "startYear": "1900"
}
```

Example Output

```
{
  "data": {
    "getPreyOf": [
      {
        "taxon": "Siluriformes",
        "items": "30.5",
        "wt_or_vol": "17.8",
        "occurrence": null,
        "unspecified": null
      },
      {
        "taxon": "Cypriniformes",
        "items": "42.3",
        "wt_or_vol": "51.2",
        "occurrence": null,
        "unspecified": null
      },
      {
        "taxon": "Perciformes",
        "items": "4.2",
        "wt_or_vol": "3.2",
        "occurrence": null,
        "unspecified": null
      },
      {
        "taxon": "Gruiformes",
        "items": "6.8",
        "wt_or_vol": "7.8",
        "occurrence": null,
        "unspecified": null
      },
      {
        "taxon": "Anseriformes",
        "items": "4.1",
        "wt_or_vol": "4.1",
        "occurrence": null,

```

```
"unspecified": null
},
{
  "taxon": "Podicipediformes",
  "items": "1.7",
  "wt_or_vol": "1.3",
  "occurrence": null,
  "unspecified": null
},
{
  "taxon": "Suliformes",
  "items": "1.7",
  "wt_or_vol": "3.5",
  "occurrence": null,
  "unspecified": null
},
{
  "taxon": "Columbiformes",
  "items": "4.2",
  "wt_or_vol": "1.2",
  "occurrence": null,
  "unspecified": null
},
{
  "taxon": "Cuculiformes",
  "items": "0.8",
  "wt_or_vol": "0.6",
  "occurrence": null,
  "unspecified": null
},
{
  "taxon": "Passeriformes",
  "items": "0.8",
  "wt_or_vol": "0",
  "occurrence": null,
  "unspecified": null
},
{
  "taxon": "Lagomorpha",
  "items": "0.8",
  "wt_or_vol": "1.5",
  "occurrence": null,
  "unspecified": null
},
```

```

    {
      "taxon": "Rodentia",
      "items": "0.8",
      "wt_or_vol": "1.2",
      "occurrence": null,
      "unspecified": null
    },
    {
      "taxon": "Carnivora",
      "items": "0.8",
      "wt_or_vol": "6.7",
      "occurrence": null,
      "unspecified": null
    }
  ]
}

```

getPredatorOf

Valid Inputs

[REQ] predatorName = anything
 [DEFAULT = "any"] preyStage = { any, larva, pupa, adult }
 [DEFAULT = "all"] dietType = { wt_or_vol, items, occurrence, unspecified, all }
 [OPT] startYear = format of YYYY
 [OPT] endYear = format of YYYY
 [DEFAULT = "all"] season = { all, summer, spring, fall, winter, multiple, unspecified }
 [DEFAULT = "all"] region = Will be provided in getRegionsPred query, "all"

Example Query

```

query(
  $name: String!
  $stage: String
  $metrics: String
  $startYear: String
  $endYear: String
  $seasons: String
  $region: String
){
  getPredatorOf(
    preyName: $name
    preyStage: $stage

```

```

    dietType: $metrics
    startYear: $startYear
    endYear: $endYear
    season: $seasons
    region: $region
  ){
    common_name
    family
    diet_type
    fraction_diet
    number_of_studies
  }
}

```

```

VARIABLES
# TODO

```

Example Output

```

{
  "data": {
    "getPredatorOf": [
      {
        "common_name": "Bobolink",
        "family": "Icteridae",
        "diet_type": "Items",
        "fraction_diet": "71.5",
        "number_of_studies": "1"
      },
      {
        "common_name": "Grasshopper Sparrow",
        "family": "Passerellidae",
        "diet_type": "Items",
        "fraction_diet": "70.7",
        "number_of_studies": "1"
      },
      {
        "common_name": "Philadelphia Vireo",
        "family": "Vireonidae",
        "diet_type": "Items",
        "fraction_diet": "68.7",
        "number_of_studies": "2"
      },
      {
        "common_name": "Indigo Bunting",

```

```
"family": "Cardinalidae",
"diet_type": "Items",
"fraction_diet": "68",
"number_of_studies": "1"
},
{
"common_name": "Oak Titmouse",
"family": "Paridae",
"diet_type": "Items",
"fraction_diet": "66.3",
"number_of_studies": "4"
},
{
"common_name": "Yellow-billed Cuckoo",
"family": "Cuculidae",
"diet_type": "Items",
"fraction_diet": "63",
"number_of_studies": "2"
},
{
"common_name": "Golden-crowned Kinglet",
"family": "Regulidae",
"diet_type": "Items",
"fraction_diet": "59.8",
"number_of_studies": "1"
},
{
"common_name": "California Scrub-Jay",
"family": "Corvidae",
"diet_type": "Occurrence",
"fraction_diet": "86",
"number_of_studies": "3"
},
{
"common_name": "Yellow-billed cuckoo",
"family": "Cuculidae",
"diet_type": "Occurrence",
"fraction_diet": "83.5",
"number_of_studies": "2"
},
{
"common_name": "Yellow-billed Magpie",
"family": "Corvidae",
"diet_type": "Occurrence",
```

```
"fraction_diet": "79.7",
"number_of_studies": "3"
},
{
"common_name": "Baltimore Oriole",
"family": "Icteridae",
"diet_type": "Occurrence",
"fraction_diet": "78.1",
"number_of_studies": "4"
},
{
"common_name": "Cedar Waxwing",
"family": "Bombycillidae",
"diet_type": "Wt_or_Vol",
"fraction_diet": "86.5",
"number_of_studies": "8"
},
{
"common_name": "Tennessee Warbler",
"family": "Parulidae",
"diet_type": "Wt_or_Vol",
"fraction_diet": "83",
"number_of_studies": "1"
},
{
"common_name": "Elegant Trogon",
"family": "Trogonidae",
"diet_type": "Wt_or_Vol",
"fraction_diet": "82.5",
"number_of_studies": "1"
},
{
"common_name": "Evening Grosbeak",
"family": "Fringillidae",
"diet_type": "Wt_or_Vol",
"fraction_diet": "80",
"number_of_studies": "1"
},
{
"common_name": "Chipping Sparrow",
"family": "Passerellidae",
"diet_type": "Wt_or_Vol",
"fraction_diet": "69",
"number_of_studies": "1"
```

```

    }
  ]
}
}

```

getPreyOfSources

Example Query

```

query($name: String!) {
  getPreyOfSources(predatorName: $name)
}

```

VARIABLES

```

{
  "name": "Bald Eagle"
}

```

Example Output

```

{
  "data": {
    "getPreyOfSources": [
      "Brown, B. T., W. C. Leibfried, T. R. Huels, and J. A. Olivera. 1991. Prey remains from Bald Eagle nests in Sonora, Mexico. Southwestern Naturalist 36:259-262.",
      "Cash, K. J., P. J. Austin-Smith, D. Banks, D. Harris, P. C. Smith. 1985. Food remains from bald eagle nest sites on Cape Breton Island, Nova Scotia. Journal of Wildlife Management 49: 223-225.",
      "Cline, K.W. and W.S. Clark. 1981. Chesapeake Bay Bald Eagle Banding Project, 1981 report and five year summary. National Wildlife Federation Raptor Information Center.",
      "Dellasala, D. A., C. L. Thomas, and R. G. Anthony. 1989. Use of domestic sheep carrion by Bald Eagles wintering in the Willamette Valley, Oregon. Northwest Science 63:104-108.",
      "Dunstan, T. C. and J. F. Harper. 1975. Food Habits of Bald Eagles in North-Central Minnesota. The Journal of Wildlife Management 39:140-143.",
      "Goulet, R. 2010. Aspects of the Ecology of Urban-nesting Bald Eagles ( Haliaeetus leucocephalus) in South-Coastal British Columbia. McGill University.",
      "Grubb, T. G. 1995. Food habits of Bald Eagles breeding in the Arizona desert. Wilson Bulletin 107:258-274.",
      "Grubb, T. G. and R. G. Lopez. 2000. Food Habits of Bald Eagles wintering in northern Arizona. Journal of Raptor Research 35: 287-292.",
      "Grubb, T. G. and R. J. Hensel. 1978. Food Habits of Nesting Bald Eagles on Kodiak Island, Alaska. Murrelet 59:70-72.",
    ]
  }
}

```

"Hanson, M. R. 2012. Food habits of breeding Bald Eagles (*Haliaeetus leucocephalus*) in Florida Everglades National Park. Florida Atlantic University.",

"Harmata, A. R. 1984. Bald Eagles of the San Luis valley, Colorado: their winter ecology and spring migration. Phd Thesis. Montana State University Bozeman.",

"Haywood, D. D. and R. D. Ohmart. 1986. Utilization of benthic-feeding fish by inland breeding Bald Eagles. *Condor* 88:35-42.",

"Hunt, W. G., R. E. Jackman, and N. L. Hutchins. 2007. Bald Eagle Foraging and Reservoir Management in Northern California. *Journal of Raptor Research* 41: 202-211.",

"Kozie, K. D. and R. K. Anderson. 1991. Productivity, diet, and environmental contaminants in Bald Eagles nesting near the Wisconsin shoreline of Lake Superior. *Archives of Environmental Contamination and Toxicology* 20:41-48.",

"Lawrence Bryan, A., L. B. Hopkins, C. S. Eldridge, I. L. Brisbin Jr., and C. H Jagoe. 2005. Behavior and Food Habits at a Bald Eagle Nest in Inland South Carolina. *Southeastern Naturalist* 4:459-468.",

"Markham, A. C., and B. D. Watts. 2008. The Influence of Salinity on the Diet of Nesting Bald Eagles. *Journal of Raptor Research* 42:99-109.",

"McEwan, L. C. and D. H. Hirth. 1980. Food habits of the Bald Eagle in north-central Florida. *Condor* 82:229-231.",

"Mersmann, T. J. 1989. Foraging ecology of Bald Eagles on the northern Chesapeake Bay with an examination of techniques used in the study of Bald Eagle food habits. Master's Thesis. Virginia Polytechnic Institute and State University Blacksburg.",

"Murie, O. J. 1940. Food Habits of the Northern Bald Eagle in the Aleutian Islands, Alaska. *Condor* 42:198-202.",

"Ofelt, C. H. 1975. Food habits of nesting Bald Eagles in southeast Alaska. *Condor* 77:337-338.",

"Retfalvi, L. 1970. Food of nesting Bald Eagles on San Juan Islan, Washington. *Condor* 72:358-361.",

"Snyder, N. F. R. and J. W. Wiley. 1976. Sexual size dimorphism in hawks and owls of North America. *Ornithological Monographs* 20.",

"Stalmaster, M. V. and R. G. Plettner. 1992. Diets and foraging effectiveness of Bald Eagles during extreme winter weather in Nebraska. *The Journal of Wildlife Management* 56:355-367.",

"Swenson, J. E., K. L. Alt, and R. L. Eng. 1986. Ecology of Bald Eagles in the greater Yellowstone ecosystem. *Wildlife Monographs* 95.",

"Thompson, C. M., P.E. Nye, G. A. Schmidt, and D. K. Garcelon. 2005. Foraging Ecology of Bald Eagles in a Freshwater Tidal System. *Journal of Wildlife Management* 69:609-617.",

"Todd, C. S., L. S. Young, R. B. Owen, and F. J. Gramlich. 1982. Food habits of Bald Eagles in Maine. *Journal of Wildlife Management* 46:636-645.",

"Toland, B. 1986. Hunting success of some Missouri raptors. *Wilson Bulletin* 98:116-125.",

"Watson, J. W. 2002. Comparative Home Ranges and Food Habits of Bald Eagles Nesting in Four Aquatic Habitats in Western Washington. *Northwestern Naturalist* 83:101-108.",

"Wright, B. S. 1953. The relation of Bald Eagles to breeding ducks in New Brunswick. *Journal of Wildlife Management* 17:55-62."

```
    ]  
  }  
}
```

getAutocompletePred

Example Query

```
query($input: String!) {  
  getAutocompletePred(input: $input)  
}
```

VARIABLE(S)

```
{  
  "input": "al"  
}
```

Example Output

```
{  
  "data": {  
    "getAutocompletePred": [  
      "Bald Eagle",  
      "Northern Cardinal",  
      "Cardinalis cardinalis",  
      "Haliaeetus leucocephalus"  
    ]  
  }  
}
```

getAutocompletePrey

Example Query

```
query($input: String!) {  
  getAutocompletePrey(input: $input)  
}
```

VARIABLE(S)

```
{  
  "input": "al"  
}
```

Example Output

```
{
  "data": {
    "getAutocompletePrey": [
      "Alces",
      "Salmo",
      "Alosa",
      "Rallus",
      "Poales",
      "Gallus",
      "Squalus",
      "Alcidae",
      "Rosales",
      "Vitales"
    ]
  }
}
```

getNumRecordsAndStudiesPred

Example Query

```
query($name: String!) {
  getNumRecordsAndStudiesPred(name: $name) {
    studies
    records
  }
}
```

VARIABLE

```
{
  "name": "Bald Eagle"
}
```

Example Output

```
{
  "data": {
    "getNumRecordsAndStudies": {
      "studies": "29",
      "records": "1218"
    }
  }
}
```

```
}
```

getRecordsPerSeason

Valid Inputs

[REQ] predatorName = anything

dietType = { wt_or_vol, items, occurrence, unspecified }

startYear = format of YYYY

endYear = format of YYYY

season = { all, summer, spring, fall, winter, multiple, unspecified }

region = anything

Example Query

```
query(  
  $name: String!  
  $metrics: String  
  $startYear: String  
  $endYear: String  
  $seasons: String  
  $region: String  
) {  
  getRecordsPerSeason(predatorName: $name, dietType: $metrics, startYear: $startYear,  
endYear: $endYear, season: $seasons, region: $region) {  
    x  
    y  
  }  
}
```

```
VARIABLE(S)  
{  
  "endYear": "2020",  
  "name": "Bald Eagle",  
  "region": "all",  
  "seasons": "all",  
  "startYear": "1941",  
  "metrics": "occurrence"  
}
```

Example Output

```
{  
  "data": {  
    "getRecordsPerSeason": [  

```

```

    {
      "x": "summer",
      "y": 52
    },
    {
      "x": "spring",
      "y": 98
    },
    {
      "x": "fall",
      "y": 0
    },
    {
      "x": "winter",
      "y": 19
    },
    {
      "x": "multiple",
      "y": 72
    },
    {
      "x": "unspecified",
      "y": 0
    }
  ]
}

```

getRecordsPerDecade

Valid Inputs

[REQ] predatorName = anything

dietType = { wt_or_vol, items, occurrence, unspecified }

startYear = format of YYYY

endYear = format of YYYY

season = { all, summer, spring, fall, winter, multiple, unspecified }

region = anything

Example Query

```

query(
  $name: String!
  $metrics: String

```

```

$startYear: String
$endYear: String
$seasons: String
$region: String
){
  getRecordsPerDecade(predatorName: $name, dietType: $metrics, startYear: $startYear,
endYear: $endYear, season: $seasons, region: $region) {
    x
    y
  }
}

```

```

VARIABLE(S)
{
  "endYear": "2020",
  "name": "Bald Eagle",
  "region": "all",
  "seasons": "all",
  "startYear": "1941",
  "metrics": "occurrence"
}

```

Example Output

```

{
  "data": {
    "getRecordsPerDecade": [
      {
        "x": "1980",
        "y": 46
      },
      {
        "x": "1990",
        "y": 91
      },
      {
        "x": "2000",
        "y": 52
      }
    ]
  }
}

```

getRecordsPerDietType

Valid Inputs

[REQ] predatorName = anything
dietType = { wt_or_vol, items, occurrence, unspecified }
startYear = format of YYYY
endYear = format of YYYY
season = { all, summer, spring, fall, winter, multiple, unspecified }
region = anything

Example Query

```
query(  
  $name: String!  
  $metrics: String  
  $startYear: String  
  $endYear: String  
  $seasons: String  
  $region: String  
) {  
  getRecordsPerDietType(predatorName: $name, dietType: $metrics, startYear: $startYear,  
endYear: $endYear, season: $seasons, region: $region) {  
    x  
    y  
  }  
}
```

```
VARIABLE(S)  
{  
  "endYear": "2020",  
  "name": "Bald Eagle",  
  "region": "all",  
  "seasons": "all",  
  "startYear": "1941",  
  "metrics": "occurrence"  
}
```

Example Output

```
{  
  "data": {  
    "getRecordsPerDietType": [  
      {  
        "name": "Bald Eagle",  
        "region": "all",  
        "seasons": "all",  
        "startYear": "1941",  
        "endYear": "2020",  
        "metrics": "occurrence"  
      }  
    ]  
  }  
}
```

```

    "x": "% by items",
    "y": 0
  },
  {
    "x": "% by weight/vol",
    "y": 0
  },
  {
    "x": "Occurrence",
    "y": 189
  },
  {
    "x": "Unspecified",
    "y": 0
  }
]
}
}

```

getMapData

Valid Inputs

[REQ] predatorName = anything

dietType = { wt_or_vol, items, occurrence, unspecified, all }

startYear = format of YYYY

endYear = format of YYYY

season = { all, summer, spring, fall, winter, multiple, unspecified }

region = anything

Example Query

```

query(
  $name: String!
  $metrics: String
  $startYear: String
  $endYear: String
  $seasons: String
  $region: String
) {
  getMapData(predatorName: $name, dietType: $metrics, startYear: $startYear, endYear:
  $endYear, season: $seasons, region: $region) {
    region
    count
  }
}

```

```
}  
}
```

VARIABLE(S)

```
{  
  "endYear": "2020",  
  "name": "Bald Eagle",  
  "region": "all",  
  "seasons": "all",  
  "startYear": "1941",  
  "metrics": "occurrence"  
}
```

Example Output

```
{  
  "data": {  
    "getMapData": [  
      {  
        "region": "Maryland",  
        "count": 46  
      },  
      {  
        "region": "Virginia",  
        "count": 46  
      },  
      {  
        "region": "Delaware",  
        "count": 46  
      },  
      {  
        "region": "British Columbia",  
        "count": 52  
      },  
      {  
        "region": "Arizona",  
        "count": 19  
      },  
      {  
        "region": "Washington",  
        "count": 72  
      }  
    ]  
  }  
}
```

getFilterValuesPred

Example Query

```
query($name: String!) {  
  getFilterValuesPred(name: $name) {  
    regions  
    startYears  
    endYears  
  }  
}
```

```
VARIABLE(S)  
{  
  "name": "Bald Eagle"  
}
```

Example Output

```
{  
  "data": {  
    "getFilterValues": {  
      "regions": [  
        "Mexico",  
        "Nova Scotia",  
        "Maryland",  
        "Virginia",  
        "New York",  
        "Maine",  
        "Missouri",  
        "Canada"  
      ],  
      "startYears": [  
        "1987",  
        "1977",  
        "1986",  
        "1967",  
  
        "1945"  
      ],  
      "endYears": [  
        "1989",  
        "1981",  
        "1987",
```

```

        "1972",
        "2009",

        "1951"
    ]
}
}
}

```

getFilterValuesPrey

Example Query

```

query($name: String!) {
  getFilterValuesPrey(name: $name) {
    regions
    startYears
    endYears
  }
}

```

```

VARIABLE(S)
{
  "name": "Siluriformes"
}

```

Example Output

```

{
  "data": {
    "getFilterValuesPrey": {
      "regions": [
        "Mexico",
        "Nova Scotia",
        "Maryland",
        "Maine",
        "Canada",
        "New England"
      ],
      "startYears": [
        "1987",
        "1977",
        "1967",

```

```

        "1989",
        "1976",
        "1945"
    ],
    "endYears": [
        "1989",
        "1981",
        "1972",
        "1985",

        "2001",
        "1980",
        "1951",
        "1990"
    ]
}
}

```

getPredatorOfSources

Example Query

```

query(
  $name: String!
  $stage: String
  $startYear: String
  $endYear: String
  $seasons: String
  $region: String
){
  getPredatorOfSources(
    preyName: $name
    preyStage: $stage
    startYear: $startYear
    endYear: $endYear
    season: $seasons
    region: $region
  )
}

```

VARIABLES

```

{
  "name": "Avena"
}

```

```
}
```

Example Output

```
{  
  "data": {  
    "getPredatorOfSources": [  
      "Beal, F. E. L. 1910. Birds of California in relation to the fruit industry, Part 2. U.S.  
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79:265-269.",  
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      "Bleier, W.J., D.J. Twedt, and M.L. Linz. 1991. Geographic and Temporal Variation in the  
Diet of Yellow-Headed Blackbirds. Condor 93(4):975-986.",  
      "Gavett, A. P. and J. S. Wakeley. 1986. Diets of House Sparrows in urban and rural  
habitats. Wilson Bulletin 98:137-144.",  
      "Beal, F. E. L. 1911. Food of the woodpeckers of the United States. U.S. Department of  
Agriculture Biological Survey, Bulletin 37.",  
    ]  
  }  
}
```

"Beal, F. E. L. 1915. Food of the robins and bluebirds of the United States. Bulletin of the U.S. Department of Agriculture 171:1-31.",

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]

}

}