

SQL Codes and Outputs for Bird Data

Summary

This document discusses conducting queries and analysing results related to bird data. It covers the process of creating a table for bird monitoring and provides sample SQL queries.

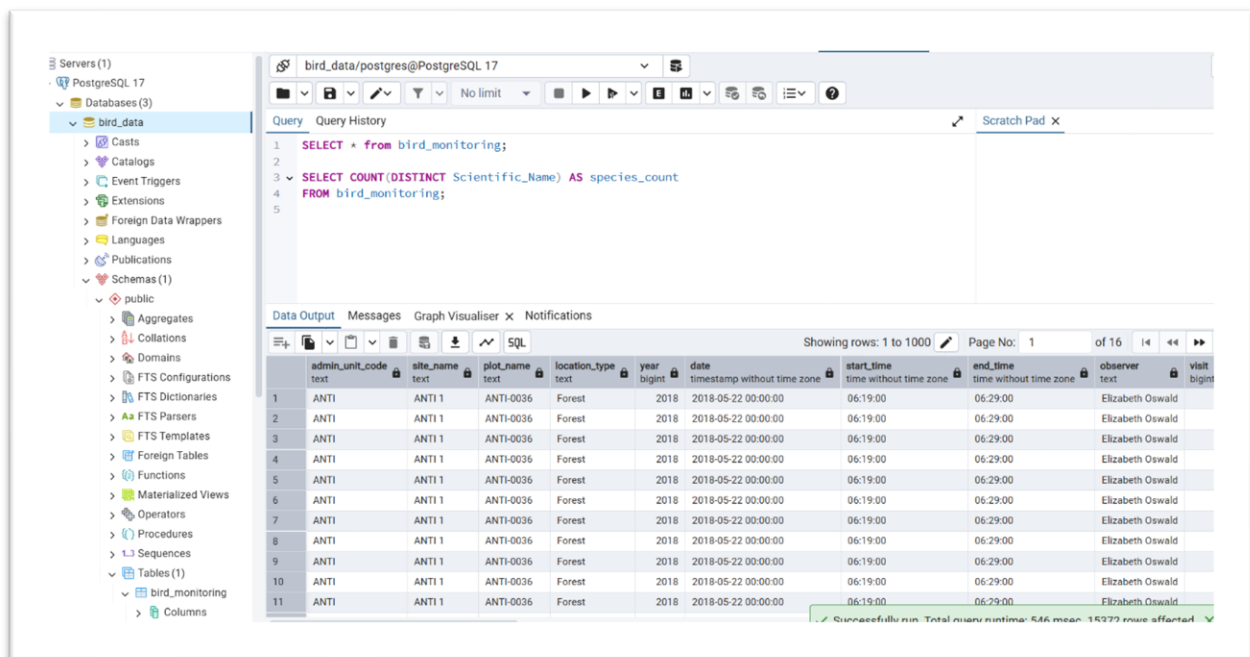
Ordered Images with Borders

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Queries and Results

1. Creating a Table for Bird Data

2. `SELECT * from bird_monitoring;`



The screenshot shows a PostgreSQL database interface with a query editor and a results table. The query editor contains the following SQL code:

```
1 SELECT * from bird_monitoring;
2
3 SELECT COUNT(DISTINCT Scientific_Name) AS species_count
4 FROM bird_monitoring;
5
```

The results table displays 11 rows of data. The columns are: admin_unit_code, site_name, plot_name, location_type, year, date, start_time, end_time, observer, and visit. The data is as follows:

	admin_unit_code	site_name	plot_name	location_type	year	date	start_time	end_time	observer	visit
1	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
2	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
3	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
4	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
5	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
6	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
7	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
8	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
9	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
10	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	
11	ANTI	ANTI 1	ANTI-0036	Forest	2018	2018-05-22 00:00:00	06:19:00	06:29:00	Elizabeth Oswald	

The interface also shows a sidebar with database objects and a status bar at the bottom indicating successful execution.

3. `SELECT COUNT(DISTINCT Scientific_Name) AS species_count`

`FROM bird_monitoring;`

```
6 SELECT COUNT(DISTINCT Scientific_Name) AS species_count
7 FROM bird_monitoring;
```

Data Output Messages Graph Visualiser X Notifications

+ [Icons] SQL

species_count
bigint
127

```
6 SELECT Location_Type, COUNT(DISTINCT Scientific_Name) AS species_count
7 FROM bird_monitoring
8 GROUP BY Location_Type
9 ORDER BY species_count DESC;
10
```

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[Icons] SQL

	location_type	species_count
	text	bigint
1	Forest	108
2	Grassland	107

```

18  SELECT Common_Name,
19         COUNT(*) AS observation_count
20  FROM bird_monitoring
21  GROUP BY Common_Name
22  ORDER BY observation_count DESC
23  LIMIT 10;
24

```

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	common_name text	observation_count bigint
1	Northern Cardinal	1125
2	Carolina Wren	993
3	Red-eyed Vireo	738
4	Eastern Tufted Titmouse	720
5	Indigo Bunting	611
6	Eastern Wood-Pewee	574
7	Field Sparrow	492
8	Red-bellied Woodpecker	489
9	American Robin	470
10	Acadian Flycatcher	462

```

25  SELECT EXTRACT(YEAR FROM Date) AS obs_year,
26         EXTRACT(MONTH FROM Date) AS obs_month,
27         COUNT(*) AS observation_count
28  FROM bird_monitoring
29  GROUP BY obs_year, obs_month
30  ORDER BY obs_year, obs_month;
31

```

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	obs_year numeric	obs_month numeric	observation_count bigint
1	2018	5	4864
2	2018	6	6211
3	2018	7	4297

```

32  SELECT Plot_Name,
33         COUNT(DISTINCT Scientific_Name) AS species_count
34  FROM bird_monitoring
35  GROUP BY Plot_Name
36  ORDER BY species_count DESC
37  LIMIT 10;
38

```

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	plot_name text	species_count bigint
1	MONO-0057	27
2	MANA-0047	27
3	ANTI-0105	27
4	CHOH-0812	26
5	MONO-0076	26
6	MONO-0085	26
7	MANA-0048	26
8	MONO-0066	26
9	ANTI-0009	25
10	ANTI-0034	25

```

39  SELECT Observer,
40         COUNT(*) AS total_records,
41         COUNT(DISTINCT Scientific_Name) AS species_observed
42  FROM bird_monitoring
43  GROUP BY Observer
44  ORDER BY total_records DESC;
45

```

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	observer text	total_records bigint	species_observed bigint
1	Elizabeth Oswald	5763	120
2	Kimberly Serno	5346	91
3	Brian Swimelar	4263	84

```

46 SELECT Location_Type,
47         COUNT(DISTINCT Scientific_Name) AS watchlist_species_count
48 FROM bird_monitoring
49 WHERE PIF_Watchlist_Status = 'TRUE'
50 GROUP BY Location_Type
51 ORDER BY watchlist_species_count DESC;
52

```

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SQL

	location_type text	watchlist_species_count bigint
1	Forest	7
2	Grassland	4

```

54 SELECT CASE
55         WHEN Humidity < 30 THEN 'Low (<30%)'
56         WHEN Humidity BETWEEN 30 AND 60 THEN 'Medium (30-60%)'
57         ELSE 'High (>60%)'
58     END AS humidity_range,
59     COUNT(*) AS observation_count
60 FROM bird_monitoring
61 GROUP BY humidity_range
62 ORDER BY observation_count DESC;
63

```

Data Output Messages Graph Visualiser X Notifications

SQL

	humidity_range text	observation_count bigint
1	High (>60%)	13394
2	Medium (30-60%)	1919
3	Low (<30%)	59

```

65 SELECT distance_numeric,
66         COUNT(*) AS observation_count
67 FROM bird_monitoring
68 GROUP BY distance_numeric
69 ORDER BY observation_count DESC;
70
71

```

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	distance_numeric double precision	observation_count bigint
1	75	8463
2	25	6909

```

71 SELECT Season,
72         Location_Type,
73         COUNT(*) AS observation_count,
74         COUNT(DISTINCT Scientific_Name) AS species_count
75 FROM bird_monitoring
76 GROUP BY Season, Location_Type
77 ORDER BY Season, species_count DESC;
78

```

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	season text	location_type text	observation_count bigint	species_count bigint
1	Spring	Grassland	2474	96
2	Spring	Forest	2390	94
3	Summer	Forest	6156	91
4	Summer	Grassland	4352	86