



```
Mid([OSGridRef],8,2),IIf(Len([OSGridRef])=14,Left([OSGridRef],4) & Mid([OSGridRef],9,2)))))) AS 1kSquare,
Int([_xo]/1000) AS X, Int([_yo]/1000) AS Y, Taxa.Taxon, Records.Date
```

```
FROM Taxa INNER JOIN (Records INNER JOIN Sites ON Records.[*Site] = Sites.[_guk]) ON Taxa.[_guk] =
Records.[*Taxon]
```

```
GROUP BY Records.[_guk], Sites.OSGridRef, Int([_xo]/1000), Int([_yo]/1000), Taxa.Taxon, Records.Date, Sites.[_xo],
Sites.[_yo], Sites.ViceCounty, Records.Quantity
```

```
HAVING (((IIf(Len([OSGridRef])<=5,Null,IIf(Len([OSGridRef])=6,[OSGridRef],IIf(Len([OSGridRef])=8,Left([OSGridRef],4)
& Mid([OSGridRef],6,2),IIf(Len([OSGridRef])=10,Left([OSGridRef],4) &
Mid([OSGridRef],7,2),IIf(Len([OSGridRef])=12,Left([OSGridRef],4) &
Mid([OSGridRef],8,2),IIf(Len([OSGridRef])=14,Left([OSGridRef],4) & Mid([OSGridRef],9,2)))))))) Is Not Null) AND
((Sites.ViceCounty)=17) AND ((Records.Quantity)<>-7))
```

```
ORDER BY Sites.OSGridRef;
```

Note: In MS Access the above queries the Records, Sites and Taxa tables and converts any OSGridRefs with greater precision than 1km Square to 1km Squares. Records where taxa are recorded as 'Not present' (Quantity = -7 ) are ignored. Once created there is no need to run this query as it is called by the next query.

### Mapping Taxa - Step 2

```
SELECT DISTINCT [Mapping Taxa - Step 1].[1kSquare], [Mapping Taxa - Step 1].X, [Mapping Taxa - Step 1].Y,
Year([Date]) AS Year, [Mapping Taxa - Step 1].Taxon
```

```
FROM [Mapping Taxa - Step 1]
```

```
GROUP BY [Mapping Taxa - Step 1].[1kSquare], [Mapping Taxa - Step 1].X, [Mapping Taxa - Step 1].Y, [Mapping
Taxa - Step 1].Taxon, [Mapping Taxa - Step 1].Date
```

```
ORDER BY [Mapping Taxa - Step 1].[1kSquare], Year([Date]);
```

Note: In MS Access the above queries the previous query to calculate a Year for each date. **Once created there is no need to run this query as it is called by the next query.**

### Mapping Taxa - Step 3

```
SELECT DISTINCT [Mapping Taxa - Step 2].[1kSquare], [Mapping Taxa - Step 2].X, [Mapping Taxa - Step 2].Y,
[Mapping Taxa - Step 2].Year, [Mapping Taxa - Step 2].Taxon
```

```
FROM [Mapping Taxa - Step 2];
```

Note: In MS Access the above queries the previous query and lists the Taxa in each 1km Square and Year ignoring the Date. **Once created there is no need to run this query as it is called by the next query.**

### Mapping Taxa - Step 4

```
SELECT DISTINCT [Mapping Taxa - Step 3].[1kSquare], [Mapping Taxa - Step 3].Taxon, [Mapping Taxa - Step 3].X,
[Mapping Taxa - Step 3].Y INTO [Mapping Taxa - Table 1]
```

```
FROM [Mapping Taxa - Step 3]
```

```
WHERE ((([Mapping Taxa - Step 3].Year)>=[Start year] And ([Mapping Taxa - Step 3].Year)<=[End year]))
```

```
GROUP BY [Mapping Taxa - Step 3].[1kSquare], [Mapping Taxa - Step 3].Taxon, [Mapping Taxa - Step 3].X,
[Mapping Taxa - Step 3].Y
```

```
ORDER BY [Mapping Taxa - Step 3].[1kSquare];
```

Note: In MS Access the above queries the previous query and counts the Taxa in each 1km Square and Year and creates a new table Mapping Taxa – Table 1 based on the Start year and End year you enter when prompted. **Once created there is no need to run this query as it is called by the next query.**

### Mapping Taxa – Step 5

```
SELECT [Mapping Taxa - Table 1].[1kSquare], Count([Mapping Taxa - Table 1].Taxon) AS CountOfTaxon, [Mapping Taxa - Table 1].X, [Mapping Taxa - Table 1].Y INTO [Mapping Taxa - Table 2]

FROM [Mapping Taxa - Table 1]

GROUP BY [Mapping Taxa - Table 1].[1kSquare], [Mapping Taxa - Table 1].X, [Mapping Taxa - Table 1].Y

ORDER BY [Mapping Taxa - Table 1].[1kSquare];
```

Note: In MS Access the above queries the Mapping Taxa – Table 1 to count the Taxa . The results are saved as a new table Mapping Taxa – Table 2

### Mapping Taxa - Step 6

```
SELECT DISTINCT [1kSquareList].ID, [1kSquareList].[Vice-County], [1kSquareList].ONE_KM, [1kSquareList].X, [1kSquareList].Y, [Mapping Taxa - Table 2].[1kSquare], [Mapping Taxa - Table 2].X, [Mapping Taxa - Table 2].Y, [Mapping Taxa - Table 2].CountOfTaxon INTO [Mapping Taxa - Table 3]

FROM [Mapping Taxa - Table 2] RIGHT JOIN 1kSquareList ON [Mapping Taxa - Table 2].[1kSquare] = [1kSquareList].ONE_KM

GROUP BY [1kSquareList].ID, [1kSquareList].[Vice-County], [1kSquareList].ONE_KM, [1kSquareList].X, [1kSquareList].Y, [Mapping Taxa - Table 2].[1kSquare], [Mapping Taxa - Table 2].X, [Mapping Taxa - Table 2].Y, [Mapping Taxa - Table 2].CountOfTaxon

HAVING ((([Mapping Taxa - Table 2].[1kSquare]) Is Null))

ORDER BY [1kSquareList].ID;
```

Note: In MS Access the above queries the Mapping Taxa - Table 2 against the 1kmSquareList you imported earlier to determine whether there are any 1km Squares in your chosen county which have no records. The results (if any) are saved an another new table Mapping Taxa - Table 2

### Mapping Taxa - Step 7

```
INSERT INTO [Mapping Taxa - Table 2] ( 1kSquare, X, Y, CountOfTaxon )

SELECT [Mapping Taxa - Table 3].ONE_KM, [Mapping Taxa - Table 3].[1kSquareList_X], [Mapping Taxa - Table 3].[1kSquareList_Y], [Mapping Taxa - Table 3].CountOfTaxon

FROM [Mapping Taxa - Table 3]

ORDER BY [Mapping Taxa - Table 3].ONE_KM;
```

Note: In MS Access the above query appends the 1km Squares in your chosen vice county without records (if any) into Mapping Taxa – Table 2

### Mapping Taxa – Step 8

```
UPDATE [Mapping Taxa - Table 2] SET [Mapping Taxa - Table 2].CountOfTaxon = 0

WHERE ((([Mapping Taxa - Table 2].CountOfTaxon) Is Null));
```

Note: In MS Access the above query updates the Sum any appended records which are null to zero

## Mapping Taxa – Step 9

```
SELECT [1kSquareList].ONE_KM, [1kSquareList].X, [1kSquareList].Y, [Mapping Taxa - Table 2].[1kSquare], [Mapping Taxa - Table 2].X, [Mapping Taxa - Table 2].Y, [Mapping Taxa - Table 2].CountOfTaxon  
  
FROM [Mapping Taxa - Table 2] INNER JOIN 1kSquareList ON [Mapping Taxa - Table 2].[1kSquare] = [1kSquareList].ONE_KM  
  
WHERE ((([1kSquareList].ONE_KM) Is Null));
```

Note: In MS Access the above query generates a list of records in which the 1k Square lies outside the Vice-County. These are mostly probably due to an input error. **You should review these records in 'Mapping Taxa Table 1 – Table' and either correct or delete them before proceeding to the final query.**

## Mapping Taxa – Step Final

```
TRANSFORM Sum([Mapping Taxa - Table 2].CountOfTaxon) AS [The Value]  
  
SELECT [Mapping Taxa - Table 2].Y  
  
FROM [Mapping Taxa - Table 2]  
  
GROUP BY [Mapping Taxa - Table 2].Y  
  
ORDER BY [Mapping Taxa - Table 2].Y DESC  
  
PIVOT [Mapping Taxa - Table 2].X;
```

.Note: In MS Access the above query creates a cross-tab table from Mapping Taxa – Table - 2, plotting the numbers of taxa in each 1km Square by eastings and northings (X and Y co-ordinates).

With the cursor in the top left-hand corner copy the table to the clipboard (Ctrl+C).

Open Excel and paste the table into a new blank worksheet (Ctrl-V) and save it.

You are now ready to customise the 'map' using Excel.