Macaca Data Summary 2023

2024-10-23

資料統整

### **原始資料**

#### **調查日3/1~6/30間、包含非森林、包含50m以下**

猴群數量

| variable | Year | 宜蘭縣 | 臺北市 | 新北市 | 桃園市 | 苗栗縣 | 臺中市 | 南投縣 | 雲林縣 | 嘉義縣 | 臺南市 | 高雄市 | 屏東縣 | 花蓮縣 | 臺東縣 | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 筆數 | 2015 | 6 |  | 1 |  | 1 | 6 | 6 | 8 | 1 |  | 2 | 3 | 13 | 2 | 49 |
| 2016 | 2 |  |  |  |  | 3 | 6 | 7 | 2 |  | 2 | 3 | 17 | 1 | 43 |
| 2017 |  |  |  |  |  | 2 | 5 | 7 | 1 |  | 4 | 6 | 5 | 2 | 32 |
| 2018 | 2 |  | 1 |  | 2 | 3 | 7 | 8 | 2 | 3 | 5 | 2 | 9 | 13 | 57 |
| 2019 | 1 |  |  | 1 | 2 | 3 | 11 | 7 | 1 | 1 | 2 | 1 | 13 | 16 | 59 |
| 2020 | 6 | 1 |  |  | 1 | 5 | 7 | 10 | 3 | 3 | 2 | 2 | 15 | 13 | 68 |
| 2021 |  | 1 | 3 |  | 2 | 6 | 8 | 10 | 7 | 1 | 5 | 5 | 11 | 11 | 70 |
| 2022 | 1 | 2 | 5 |  | 4 | 4 | 11 | 13 | 3 | 3 | 4 | 5 | 21 | 21 | 97 |
| 2023 | 3 | 4 | 4 |  | 7 | 6 | 10 | 11 | 7 |  | 13 | 3 | 13 | 8 | 89 |
| 樣區數 | 2015 | 4 |  | 1 |  | 1 | 4 | 5 | 3 | 1 |  | 2 | 2 | 8 | 2 | 33 |
| 2016 | 2 |  |  |  |  | 3 | 6 | 2 | 2 |  | 2 | 2 | 9 | 1 | 29 |
| 2017 |  |  |  |  |  | 1 | 3 | 4 | 1 |  | 1 | 3 | 3 | 2 | 18 |
| 2018 | 2 |  | 1 |  | 1 | 3 | 6 | 2 | 1 | 1 | 2 | 2 | 6 | 6 | 33 |
| 2019 | 1 |  |  | 1 | 2 | 2 | 7 | 2 | 1 | 1 | 1 | 1 | 9 | 9 | 37 |
| 2020 | 4 | 1 |  |  | 1 | 3 | 5 | 3 | 3 | 2 | 2 | 2 | 9 | 5 | 40 |
| 2021 |  | 1 | 3 |  | 2 | 4 | 6 | 2 | 2 | 1 | 2 | 3 | 6 | 6 | 38 |
| 2022 | 1 | 1 | 4 |  | 3 | 3 | 8 | 3 | 1 | 1 | 2 | 3 | 11 | 10 | 51 |
| 2023 | 3 | 1 | 4 |  | 4 | 5 | 9 | 3 | 2 |  | 3 | 3 | 7 | 5 | 49 |
| 樣點數 | 2015 | 5 |  | 1 |  | 1 | 6 | 6 | 7 | 1 |  | 2 | 3 | 12 | 2 | 46 |
| 2016 | 2 |  |  |  |  | 3 | 6 | 7 | 2 |  | 2 | 2 | 16 | 1 | 41 |
| 2017 |  |  |  |  |  | 2 | 4 | 7 | 1 |  | 4 | 5 | 5 | 2 | 30 |
| 2018 | 2 |  | 1 |  | 2 | 3 | 7 | 6 | 2 | 2 | 5 | 2 | 9 | 12 | 53 |
| 2019 | 1 |  |  | 1 | 2 | 2 | 11 | 5 | 1 | 1 | 2 | 1 | 12 | 13 | 52 |
| 2020 | 6 | 1 |  |  | 1 | 5 | 7 | 9 | 3 | 3 | 2 | 2 | 14 | 11 | 64 |
| 2021 |  | 1 | 3 |  | 2 | 5 | 8 | 8 | 6 | 1 | 5 | 5 | 10 | 10 | 64 |
| 2022 | 1 | 2 | 5 |  | 4 | 4 | 11 | 11 | 3 | 2 | 4 | 5 | 20 | 19 | 91 |
| 2023 | 3 | 4 | 4 |  | 7 | 6 | 10 | 9 | 7 |  | 9 | 3 | 13 | 8 | 83 |

孤猴數量

| variable | Year | 宜蘭縣 | 臺北市 | 新北市 | 新竹縣 | 苗栗縣 | 臺中市 | 南投縣 | 雲林縣 | 嘉義縣 | 臺南市 | 高雄市 | 屏東縣 | 花蓮縣 | 臺東縣 | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 筆數 | 2015 |  |  |  |  | 1 | 2 | 1 | 4 | 1 |  | 6 |  | 10 |  | 25 |
| 2016 | 1 |  |  |  |  |  | 1 |  |  |  | 5 | 3 | 4 | 1 | 15 |
| 2017 |  |  |  |  |  | 2 | 2 | 5 |  |  | 1 | 2 | 3 |  | 15 |
| 2018 |  |  |  |  |  | 4 | 3 | 2 | 2 |  |  | 1 | 13 | 4 | 29 |
| 2019 | 1 |  | 1 |  |  |  | 4 | 1 | 1 | 2 | 4 | 1 | 4 | 1 | 20 |
| 2020 | 1 |  |  | 1 |  | 6 | 5 | 1 | 4 | 1 | 7 | 3 | 3 | 3 | 35 |
| 2021 | 2 |  | 1 |  | 2 |  | 8 | 2 | 1 | 2 | 4 | 4 | 7 | 2 | 35 |
| 2022 | 2 |  | 3 |  |  |  | 10 | 2 |  | 3 | 4 | 3 | 7 | 6 | 40 |
| 2023 | 4 | 2 | 2 |  | 4 | 2 | 2 | 3 | 4 |  | 5 | 1 | 10 | 5 | 44 |
| 樣區數 | 2015 |  |  |  |  | 1 | 2 | 1 | 2 | 1 |  | 2 |  | 6 |  | 15 |
| 2016 | 1 |  |  |  |  |  | 1 |  |  |  | 3 | 2 | 4 | 1 | 12 |
| 2017 |  |  |  |  |  | 2 | 2 | 2 |  |  | 1 | 1 | 3 |  | 11 |
| 2018 |  |  |  |  |  | 4 | 3 | 2 | 1 |  |  | 1 | 8 | 4 | 23 |
| 2019 | 1 |  | 1 |  |  |  | 3 | 1 | 1 | 1 | 4 | 1 | 3 | 1 | 17 |
| 2020 | 1 |  |  | 1 |  | 2 | 5 | 1 | 3 | 1 | 4 | 2 | 2 | 2 | 24 |
| 2021 | 2 |  | 1 |  | 2 |  | 7 | 2 | 1 | 1 | 3 | 3 | 5 | 2 | 29 |
| 2022 | 2 |  | 2 |  |  |  | 9 | 2 |  | 1 | 2 | 3 | 4 | 3 | 28 |
| 2023 | 3 | 2 | 2 |  | 4 | 2 | 2 | 3 | 2 |  | 4 | 1 | 7 | 3 | 35 |
| 樣點數 | 2015 |  |  |  |  | 1 | 2 | 1 | 4 | 1 |  | 6 |  | 8 |  | 23 |
| 2016 | 1 |  |  |  |  |  | 1 |  |  |  | 4 | 3 | 4 | 1 | 14 |
| 2017 |  |  |  |  |  | 2 | 2 | 5 |  |  | 1 | 2 | 3 |  | 15 |
| 2018 |  |  |  |  |  | 4 | 3 | 2 | 2 |  |  | 1 | 13 | 4 | 29 |
| 2019 | 1 |  | 1 |  |  |  | 3 | 1 | 1 | 1 | 4 | 1 | 4 | 1 | 18 |
| 2020 | 1 |  |  | 1 |  | 4 | 5 | 1 | 4 | 1 | 7 | 3 | 3 | 3 | 33 |
| 2021 | 2 |  | 1 |  | 2 |  | 8 | 2 | 1 | 2 | 4 | 4 | 7 | 2 | 35 |
| 2022 | 2 |  | 3 |  |  |  | 10 | 2 |  | 3 | 3 | 3 | 7 | 5 | 38 |
| 2023 | 4 | 2 | 2 |  | 4 | 2 | 2 | 3 | 4 |  | 5 | 1 | 10 | 5 | 44 |

### **分析用**

#### **調查日3/1~6/30間、“不”包含非森林、“不”包含50m以下**

猴群數量

| variable | Year | 宜蘭縣 | 臺北市 | 新北市 | 桃園市 | 苗栗縣 | 臺中市 | 南投縣 | 雲林縣 | 嘉義縣 | 臺南市 | 高雄市 | 屏東縣 | 花蓮縣 | 臺東縣 | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 筆數 | 2015 | 5 |  | 1 |  | 1 | 6 | 6 | 8 |  |  | 2 | 3 | 12 | 2 | 46 |
| 2016 | 1 |  |  |  |  | 3 | 6 | 7 | 2 |  | 2 | 3 | 17 | 1 | 42 |
| 2017 |  |  |  |  |  |  | 5 | 7 | 1 |  | 4 | 5 | 5 | 2 | 29 |
| 2018 | 2 |  | 1 |  | 2 | 2 | 7 | 8 | 2 | 3 | 5 | 2 | 8 | 13 | 55 |
| 2019 |  |  |  | 1 | 2 | 3 | 11 | 7 | 1 | 1 | 2 | 1 | 12 | 15 | 56 |
| 2020 | 6 | 1 |  |  | 1 | 5 | 7 | 10 | 3 | 3 | 2 | 2 | 13 | 13 | 66 |
| 2021 |  | 1 | 3 |  | 2 | 5 | 7 | 10 | 7 | 1 | 3 | 5 | 11 | 11 | 66 |
| 2022 |  | 2 | 5 |  | 4 | 4 | 9 | 13 | 3 | 3 | 4 | 2 | 20 | 21 | 90 |
| 2023 | 3 | 4 | 4 |  | 7 | 5 | 10 | 11 | 7 |  | 12 | 2 | 13 | 8 | 86 |
| 樣區數 | 2015 | 3 |  | 1 |  | 1 | 4 | 5 | 3 |  |  | 2 | 2 | 7 | 2 | 30 |
| 2016 | 1 |  |  |  |  | 3 | 6 | 2 | 2 |  | 2 | 2 | 9 | 1 | 28 |
| 2017 |  |  |  |  |  |  | 3 | 4 | 1 |  | 1 | 2 | 3 | 2 | 16 |
| 2018 | 2 |  | 1 |  | 1 | 2 | 6 | 2 | 1 | 1 | 2 | 2 | 5 | 6 | 31 |
| 2019 |  |  |  | 1 | 2 | 2 | 7 | 2 | 1 | 1 | 1 | 1 | 8 | 9 | 35 |
| 2020 | 4 | 1 |  |  | 1 | 3 | 5 | 3 | 3 | 2 | 2 | 2 | 7 | 5 | 38 |
| 2021 |  | 1 | 3 |  | 2 | 4 | 5 | 2 | 2 | 1 | 2 | 3 | 6 | 6 | 37 |
| 2022 |  | 1 | 4 |  | 3 | 3 | 7 | 3 | 1 | 1 | 2 | 2 | 10 | 10 | 47 |
| 2023 | 3 | 1 | 4 |  | 4 | 5 | 9 | 3 | 2 |  | 3 | 2 | 7 | 5 | 48 |
| 樣點數 | 2015 | 4 |  | 1 |  | 1 | 6 | 6 | 7 |  |  | 2 | 3 | 11 | 2 | 43 |
| 2016 | 1 |  |  |  |  | 3 | 6 | 7 | 2 |  | 2 | 2 | 16 | 1 | 40 |
| 2017 |  |  |  |  |  |  | 4 | 7 | 1 |  | 4 | 4 | 5 | 2 | 27 |
| 2018 | 2 |  | 1 |  | 2 | 2 | 7 | 6 | 2 | 2 | 5 | 2 | 8 | 12 | 51 |
| 2019 |  |  |  | 1 | 2 | 2 | 11 | 5 | 1 | 1 | 2 | 1 | 11 | 12 | 49 |
| 2020 | 6 | 1 |  |  | 1 | 5 | 7 | 9 | 3 | 3 | 2 | 2 | 12 | 11 | 62 |
| 2021 |  | 1 | 3 |  | 2 | 4 | 7 | 8 | 6 | 1 | 3 | 5 | 10 | 10 | 60 |
| 2022 |  | 2 | 5 |  | 4 | 4 | 9 | 11 | 3 | 2 | 4 | 2 | 19 | 19 | 84 |
| 2023 | 3 | 4 | 4 |  | 7 | 5 | 10 | 9 | 7 |  | 8 | 2 | 13 | 8 | 80 |

孤猴數量

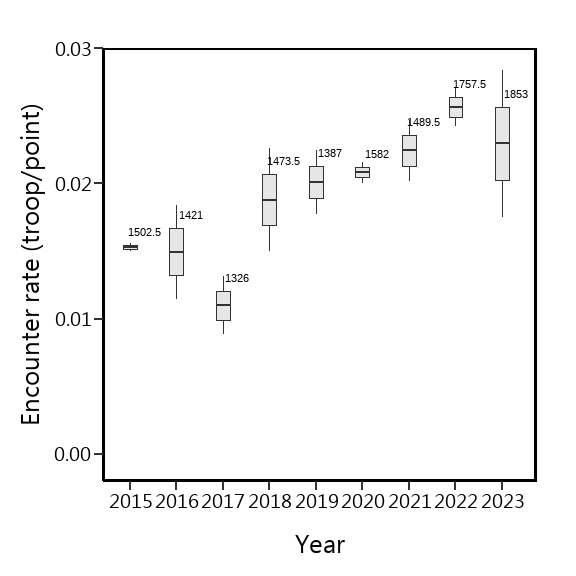
| variable | Year | 宜蘭縣 | 臺北市 | 新北市 | 新竹縣 | 苗栗縣 | 臺中市 | 南投縣 | 雲林縣 | 嘉義縣 | 臺南市 | 高雄市 | 屏東縣 | 花蓮縣 | 臺東縣 | Total |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 筆數 | 2015 |  |  |  |  | 1 | 2 | 1 | 4 | 1 |  | 6 |  | 9 |  | 24 |
| 2016 | 1 |  |  |  |  |  | 1 |  |  |  | 5 | 2 | 3 |  | 12 |
| 2017 |  |  |  |  |  | 2 | 2 | 5 |  |  | 1 | 2 | 2 |  | 14 |
| 2018 |  |  |  |  |  | 4 | 2 | 2 | 2 |  |  | 1 | 12 | 4 | 27 |
| 2019 | 1 |  | 1 |  |  |  | 4 | 1 | 1 | 2 | 3 | 1 | 4 | 1 | 19 |
| 2020 | 1 |  |  | 1 |  | 6 | 5 | 1 | 4 | 1 | 6 | 3 | 1 | 3 | 32 |
| 2021 | 2 |  | 1 |  | 2 |  | 8 | 2 | 1 | 2 | 3 | 3 | 7 | 2 | 33 |
| 2022 | 1 |  | 2 |  |  |  | 9 | 2 |  | 3 | 4 | 3 | 6 | 6 | 36 |
| 2023 | 4 | 2 | 2 |  | 4 | 1 | 2 | 3 | 4 |  | 5 | 1 | 9 | 5 | 42 |
| 樣區數 | 2015 |  |  |  |  | 1 | 2 | 1 | 2 | 1 |  | 2 |  | 5 |  | 14 |
| 2016 | 1 |  |  |  |  |  | 1 |  |  |  | 3 | 1 | 3 |  | 9 |
| 2017 |  |  |  |  |  | 2 | 2 | 2 |  |  | 1 | 1 | 2 |  | 10 |
| 2018 |  |  |  |  |  | 4 | 2 | 2 | 1 |  |  | 1 | 7 | 4 | 21 |
| 2019 | 1 |  | 1 |  |  |  | 3 | 1 | 1 | 1 | 3 | 1 | 3 | 1 | 16 |
| 2020 | 1 |  |  | 1 |  | 2 | 5 | 1 | 3 | 1 | 3 | 2 | 1 | 2 | 22 |
| 2021 | 2 |  | 1 |  | 2 |  | 7 | 2 | 1 | 1 | 2 | 2 | 5 | 2 | 27 |
| 2022 | 1 |  | 2 |  |  |  | 8 | 2 |  | 1 | 2 | 3 | 3 | 3 | 25 |
| 2023 | 3 | 2 | 2 |  | 4 | 1 | 2 | 3 | 2 |  | 4 | 1 | 6 | 3 | 33 |
| 樣點數 | 2015 |  |  |  |  | 1 | 2 | 1 | 4 | 1 |  | 6 |  | 7 |  | 22 |
| 2016 | 1 |  |  |  |  |  | 1 |  |  |  | 4 | 2 | 3 |  | 11 |
| 2017 |  |  |  |  |  | 2 | 2 | 5 |  |  | 1 | 2 | 2 |  | 14 |
| 2018 |  |  |  |  |  | 4 | 2 | 2 | 2 |  |  | 1 | 12 | 4 | 27 |
| 2019 | 1 |  | 1 |  |  |  | 3 | 1 | 1 | 1 | 3 | 1 | 4 | 1 | 17 |
| 2020 | 1 |  |  | 1 |  | 4 | 5 | 1 | 4 | 1 | 6 | 3 | 1 | 3 | 30 |
| 2021 | 2 |  | 1 |  | 2 |  | 8 | 2 | 1 | 2 | 3 | 3 | 7 | 2 | 33 |
| 2022 | 1 |  | 2 |  |  |  | 9 | 2 |  | 3 | 3 | 3 | 6 | 5 | 34 |
| 2023 | 4 | 2 | 2 |  | 4 | 1 | 2 | 3 | 4 |  | 5 | 1 | 9 | 5 | 42 |

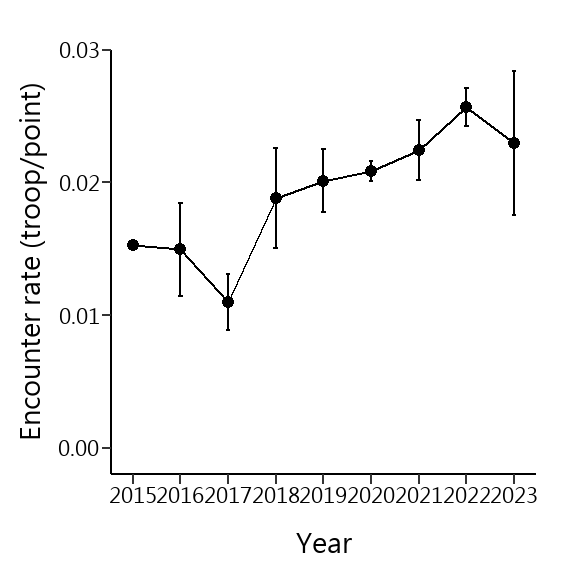
| Region2 | variable | 2015 | | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | Mean | Se |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 |
| North | 樣點 | 601 | 541 | 547 | 454 | 434 | 424 | 541 | 450 | 425 | 375 | 506 | 490 | 561 | 406 | 633 | 580 | 737 | 705 | 522.8 | 24.1 |
| 猴群 | 4 | 3 | 0 | 1 | 0 | 0 | 2 | 3 | 1 | 2 | 4 | 4 | 4 | 2 | 9 | 2 | 14 | 4 | 3.3 | 0.8 |
| 相對密度 | 0.0070 | 0.0060 | 0.0000 | 0.0020 | 0.0000 | 0.0000 | 0.0040 | 0.0070 | 0.0020 | 0.0050 | 0.0080 | 0.0080 | 0.0070 | 0.0050 | 0.0140 | 0.0030 | 0.0190 | 0.0060 | 0.0057 | 0.0011 |
| Center | 樣點 | 432 | 425 | 461 | 450 | 463 | 431 | 515 | 501 | 501 | 489 | 561 | 538 | 546 | 377 | 576 | 537 | 597 | 506 | 494.8 | 13.9 |
| 猴群 | 7 | 5 | 5 | 4 | 2 | 3 | 4 | 5 | 6 | 8 | 8 | 4 | 8 | 4 | 8 | 5 | 9 | 6 | 5.6 | 0.5 |
| 相對密度 | 0.0160 | 0.0120 | 0.0110 | 0.0090 | 0.0040 | 0.0070 | 0.0080 | 0.0100 | 0.0120 | 0.0160 | 0.0140 | 0.0070 | 0.0150 | 0.0110 | 0.0140 | 0.0090 | 0.0150 | 0.0120 | 0.0112 | 0.0008 |
| South | 樣點 | 112 | 112 | 123 | 123 | 101 | 101 | 121 | 114 | 132 | 125 | 154 | 141 | 188 | 164 | 194 | 183 | 182 | 168 | 141.0 | 7.4 |
| 猴群 | 2 | 3 | 2 | 3 | 4 | 5 | 3 | 4 | 3 | 0 | 3 | 1 | 3 | 5 | 2 | 4 | 8 | 6 | 3.4 | 0.4 |
| 相對密度 | 0.0180 | 0.0270 | 0.0160 | 0.0240 | 0.0400 | 0.0500 | 0.0250 | 0.0350 | 0.0230 | 0.0000 | 0.0190 | 0.0070 | 0.0160 | 0.0300 | 0.0100 | 0.0220 | 0.0440 | 0.0360 | 0.0246 | 0.0031 |
| Southwest | 樣點 | 173 | 167 | 145 | 145 | 146 | 147 | 138 | 136 | 138 | 138 | 144 | 144 | 144 | 130 | 142 | 130 | 149 | 124 | 143.3 | 2.8 |
| 猴群 | 4 | 4 | 3 | 6 | 2 | 6 | 6 | 7 | 4 | 5 | 5 | 11 | 8 | 10 | 7 | 12 | 11 | 7 | 6.6 | 0.7 |
| 相對密度 | 0.0230 | 0.0240 | 0.0210 | 0.0410 | 0.0140 | 0.0410 | 0.0430 | 0.0510 | 0.0290 | 0.0360 | 0.0350 | 0.0760 | 0.0560 | 0.0770 | 0.0490 | 0.0920 | 0.0740 | 0.0560 | 0.0466 | 0.0052 |
| Hualien | 樣點 | 162 | 162 | 149 | 127 | 156 | 148 | 141 | 140 | 151 | 151 | 179 | 157 | 157 | 137 | 170 | 165 | 153 | 147 | 152.9 | 2.9 |
| 猴群 | 5 | 7 | 6 | 11 | 3 | 2 | 4 | 4 | 9 | 3 | 8 | 5 | 7 | 4 | 10 | 10 | 8 | 5 | 6.2 | 0.6 |
| 相對密度 | 0.0310 | 0.0430 | 0.0400 | 0.0870 | 0.0190 | 0.0140 | 0.0280 | 0.0290 | 0.0600 | 0.0200 | 0.0450 | 0.0320 | 0.0450 | 0.0290 | 0.0590 | 0.0610 | 0.0520 | 0.0340 | 0.0404 | 0.0043 |
| Taitung | 樣點 | 59 | 59 | 59 | 59 | 56 | 45 | 75 | 75 | 75 | 74 | 75 | 75 | 89 | 80 | 102 | 103 | 119 | 119 | 77.7 | 5.0 |
| 猴群 | 2 | 0 | 1 | 0 | 1 | 1 | 4 | 9 | 9 | 6 | 7 | 6 | 4 | 7 | 8 | 13 | 5 | 3 | 4.8 | 0.9 |
| 相對密度 | 0.0340 | 0.0000 | 0.0170 | 0.0000 | 0.0180 | 0.0220 | 0.0530 | 0.1200 | 0.1200 | 0.0810 | 0.0930 | 0.0800 | 0.0450 | 0.0880 | 0.0780 | 0.1260 | 0.0420 | 0.0250 | 0.0579 | 0.0098 |
| TW | 樣點 | 1539 | 1466 | 1484 | 1358 | 1356 | 1296 | 1531 | 1416 | 1422 | 1352 | 1619 | 1545 | 1685 | 1294 | 1817 | 1698 | 1937 | 1769 | 1532.4 | 44.2 |
| 猴群 | 24 | 22 | 17 | 25 | 12 | 17 | 23 | 32 | 32 | 24 | 35 | 31 | 34 | 32 | 44 | 46 | 55 | 31 | 29.8 | 2.6 |
| 相對密度 | 0.0160 | 0.0150 | 0.0110 | 0.0180 | 0.0090 | 0.0130 | 0.0150 | 0.0230 | 0.0230 | 0.0180 | 0.0220 | 0.0200 | 0.0200 | 0.0250 | 0.0240 | 0.0270 | 0.0280 | 0.0180 | 0.0192 | 0.0013 |

TypeName、猴群數、樣區數

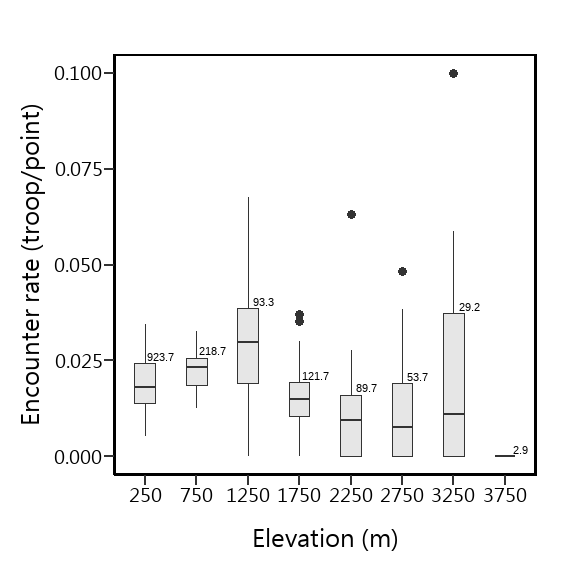
| TypeName.1 | 樣點數 | | 猴群數 | | 相對密度 | |
| --- | --- | --- | --- | --- | --- | --- |
| Mean | Se | Mean | Se | Mean | Se |
| Forest (EL>50m) | 1380.3 | 112.0 | 26.8 | 3.1 | 0.0172 | 0.0017 |
| 闊葉林 | 1052.6 | 33.1 | 20.3 | 2.1 | 0.0188 | 0.0015 |
| 針葉林 | 146.4 | 6.2 | 2.3 | 0.3 | 0.0157 | 0.0018 |
| 混淆林 | 164.7 | 3.6 | 3.8 | 0.5 | 0.0234 | 0.0034 |
| 竹林 | 168.7 | 4.0 | 3.3 | 0.5 | 0.0203 | 0.0034 |
| Forest (EL<50m) | 197.0 | 8.3 | 0.5 | 0.2 | 0.0025 | 0.0008 |
| 非森林 | 1157.1 | 97.1 | 0.6 | 0.2 | 0.0005 | 0.0002 |
| Total | 2714.7 | 223.6 | 27.9 | 3.2 | 0.0091 | 0.0009 |

年的相對密度

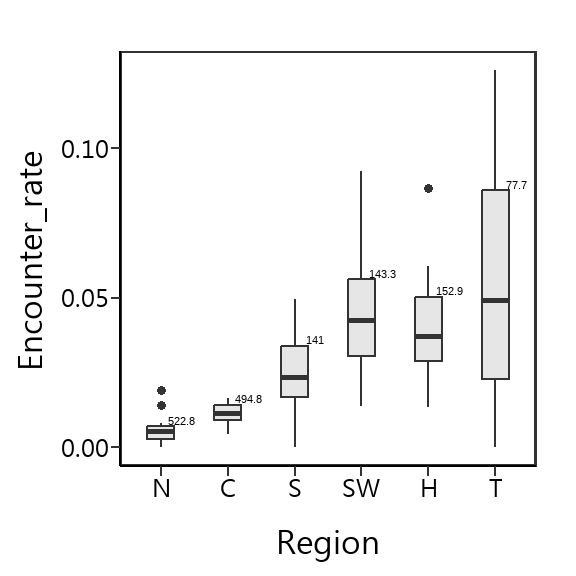




海拔的相對密度

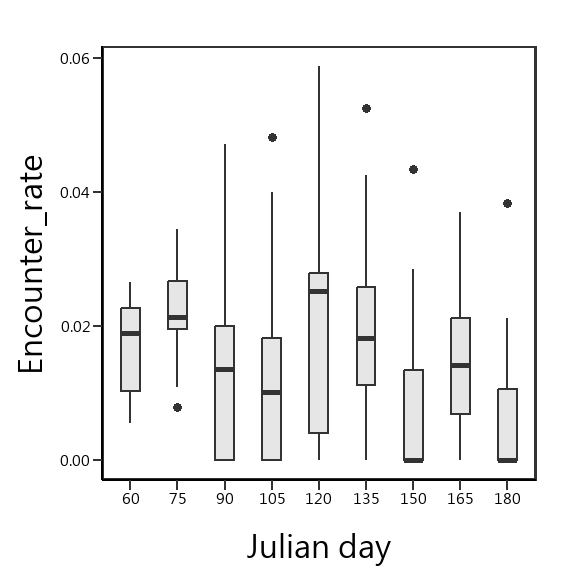


Region的相對密度

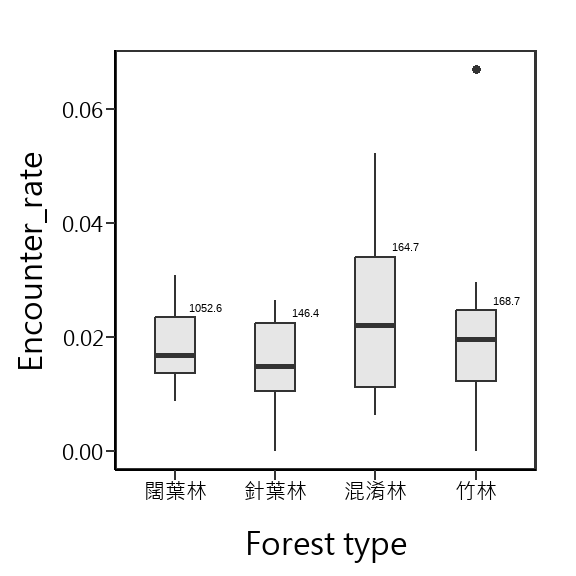


Julian Day的相對密度

Julian Day = 60，係指第60~74天，Julian Day = 75，係指第75~89天，以此類推，僅Julian Day = 180，係指第180~182天



森林類型的相對密度



GLMM

Trim

wald

## Covariate W df p  
## 1 Region2 60.01734 35 0.005320931

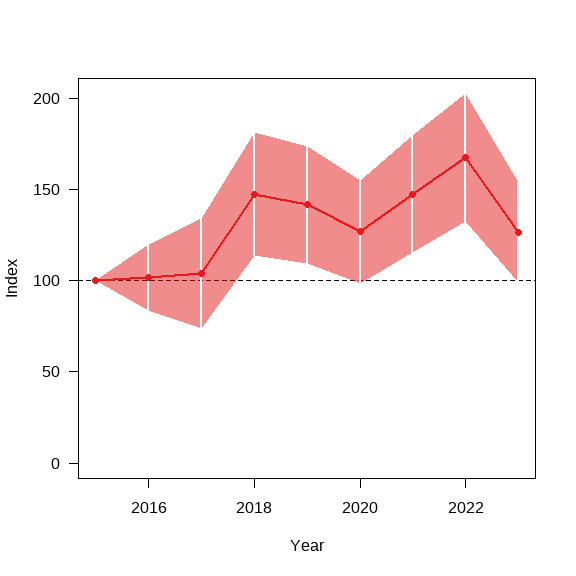
| Covariate | W | df | p |
| --- | --- | --- | --- |
| Region2 | 60.01734 | 35 | 0.005320931 |

## Wald test for significance of covariates  
## Covariate W df p  
## Region2 60.01734 35 0.005320931  
##   
## Wald test for significance of changes in slope  
## Changepoint Wald\_test df p  
## 2015 9.631248 6 0.1410647  
## 2017 9.887503 6 0.1294702  
## 2018 8.343675 6 0.2139904  
## 2019 4.242584 6 0.6438853  
## 2020 2.817509 6 0.8313782  
## 2021 5.896638 6 0.4348679  
## 2022 9.663879 6 0.1395392

| Changepoint | Wald\_test | df | p |
| --- | --- | --- | --- |
| 2015 | 9.631248 | 6 | 0.1410647 |
| 2017 | 9.887503 | 6 | 0.1294702 |
| 2018 | 8.343675 | 6 | 0.2139904 |
| 2019 | 4.242584 | 6 | 0.6438853 |
| 2020 | 2.817509 | 6 | 0.8313782 |
| 2021 | 5.896638 | 6 | 0.4348679 |
| 2022 | 9.663879 | 6 | 0.1395392 |

## Wald test for significance of covariates  
## Covariate W df p  
## Region2 60.01734 35 0.005320931  
##   
## Wald test for significance of changes in slope  
## Changepoint Wald\_test df p  
## 2015 9.631248 6 0.1410647  
## 2017 9.887503 6 0.1294702  
## 2018 8.343675 6 0.2139904  
## 2019 4.242584 6 0.6438853  
## 2020 2.817509 6 0.8313782  
## 2021 5.896638 6 0.4348679  
## 2022 9.663879 6 0.1395392

| Changepoint | Wald\_test | df | p |
| --- | --- | --- | --- |
| 2015 | 9.631248 | 6 | 0.1410647 |
| 2017 | 9.887503 | 6 | 0.1294702 |
| 2018 | 8.343675 | 6 | 0.2139904 |
| 2019 | 4.242584 | 6 | 0.6438853 |
| 2020 | 2.817509 | 6 | 0.8313782 |
| 2021 | 5.896638 | 6 | 0.4348679 |
| 2022 | 9.663879 | 6 | 0.1395392 |

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Overall

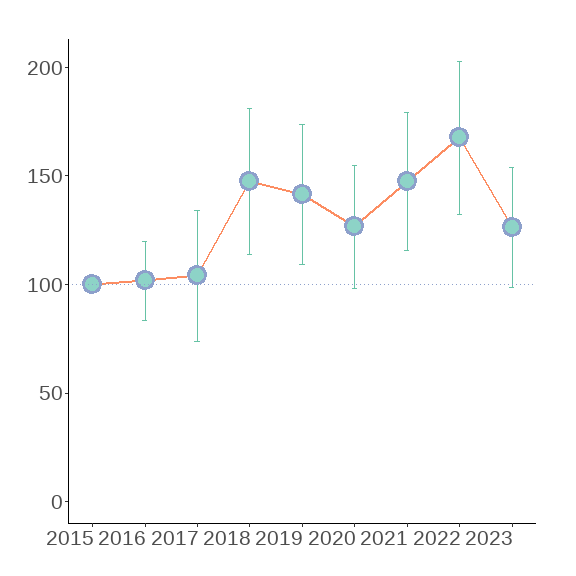
## from upto add se\_add mul se\_mul p meaning  
## 2015 2023 0.04966655 0.0235984 1.050921 0.02480005 0.0733649 Uncertain

| from | upto | add | se\_add | mul | se\_mul | p | meaning |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 2015 | 2023 | 0.04966655 | 0.0235984 | 1.050921 | 0.02480005 | 0.0733649 | Uncertain |

overall

heatmap

index



Estimate

海拔50m以上的森林總面積=21028.14 (km2)  
方法：bootstrap  
重複抽樣：10,000次  
單位面積的半徑: 100m2

| 項目 | 值 |
| --- | --- |
| 相對密度(群/樣點) | 0.0194 |
| 相對密度(群/樣點)(95% CI) | 0.0178 ~ 0.0211 |
| 絕對密度(群/ km2) | 0.6186 |
| 絕對密度(95% CI) | 0.5654 ~ 0.6716 |
| 群 | 13007群 |
| 猴群數(95% CI): | 11890 ~ 14123群 |