

CHAPTER 7

RESULTS: ECOLOGY OF NEST TREE HABITAT

7.1 CLIMATE

The climate of nest habitat of the Asian Paradise Flycatcher for 2 study areas were presented in this chapter including: number of rain days/month, monthly rainfall (mm), and mean monthly of minimum and maximum temperatures. The average number of rainy days/month during the rainy season at Chiang Dao Research Station ranged from 10 – 16 days during May – October from 2005 – 2009. The most maximum rainy days/month was 22 days in July 2006 (Table 7.1 and Figure 7.1). For Krabi, the average number of rainy days/month during the rainy season ranged from 8–19 days/month during May – December from 2008 – 2009. The most maximum rainy days/month was 22 days in August 2009 (Table 7.2 and Figure 7.2).

The average monthly rainfall during the rainy season at Chiang Dao ranged from 131.6 – 258 mm in 2005 – 2009. The rainfall was highest in September 2005 with 396 mm (Table 7.3 and Figure 7.3). For Krabi, the average rainfall during the rainy season ranged from 45.6–240.1 mm in 2008 – 2009. The rainfall was highest in June 2008 with 209.5 mm (Table 7.4 and Figure 7.4). The number of rainy days and rainfall at both study sites seemed correlated that rather optimal with the breeding season of the Asian Paradise Flycatcher which started on March – July when it had slightly raining in Chiang Dao, and not too much in Krabi.

The range of temperature at Chiang Dao is shown in Table 7.5 and Figure 7.5. The temperature was presented in the rainy and cool-dry seasons, but was sweltering in the hot-dry season. The temperature was rather constant at Khao Pra-Bang Khram (Table 7.6 and Figure 7.6).

Table 7.1 Number of rainy days/month at Chiang Dao (2005-2009).

Source: Thai Meteorological Department, Chiang Mai.

| Year | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Total | Mean |
|-------|------|------|------|------|-----|------|------|------|------|------|------|------|-------|------|
| 2005 | 0 | 0 | 2 | 6 | 6 | 18 | 14 | 14 | 18 | 7 | 4 | 5 | 94 | 8 |
| 2006 | 0 | 1 | 2 | 8 | 15 | 15 | 22 | 20 | 13 | 8 | 2 | 0 | 106 | 9 |
| 2007 | 0 | 0 | 2 | 9 | 19 | 17 | 12 | 16 | 12 | 8 | 5 | 0 | 100 | 8 |
| 2008 | 1 | 3 | 0 | 7 | 19 | 16 | 18 | 17 | 16 | 15 | 4 | 1 | 117 | 10 |
| 2009 | 0 | 0 | 2 | 10 | 15 | 15 | 16 | 14 | 11 | 11 | 0 | 0 | 94 | 8 |
| Total | 1 | 4 | 8 | 40 | 74 | 81 | 82 | 81 | 70 | 49 | 15 | 6 | 511 | 43 |
| Mean | 0 | 1 | 2 | 8 | 15 | 16 | 16 | 16 | 14 | 10 | 3 | 1 | 102 | 9 |

Table 7.2 Number of rain days/month at Krabi (2008-2009).

Source: Thai Meteorological Department, Krabi.

| Year | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Total | Mean |
|-------|------|------|------|------|-----|------|------|------|------|------|------|------|-------|------|
| 2008 | 4 | 6 | 10 | 14 | 16 | 16 | 15 | 12 | 17 | 18 | 14 | 9 | 151 | 13 |
| 2009 | 5 | 5 | 20 | 11 | 19 | 11 | 14 | 22 | 19 | 20 | 15 | 6 | 167 | 14 |
| Total | 9 | 11 | 30 | 25 | 35 | 27 | 29 | 34 | 36 | 38 | 29 | 15 | 318 | 27 |
| Mean | 5 | 6 | 15 | 13 | 18 | 14 | 15 | 17 | 18 | 19 | 15 | 8 | 159 | 13 |

Table 7.3 Monthly rainfall (mm) at Chiang Dao (2005-2009).

Source: Thai Meteorological Department, Chiang Mai.

| Year | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Total | Mean |
|-------|------|------|------|-------|-------|-------|-------|-------|--------|-------|-------|------|--------|-------|
| 2005 | 0.0 | 0.0 | 8.4 | 90.5 | 54.2 | 227.0 | 213.0 | 310.0 | 396.0 | 96.3 | 117.0 | 70.4 | 1582.8 | 131.9 |
| 2006 | 0.0 | 18.3 | 31.8 | 139.0 | 216.0 | 99.4 | 248.0 | 209.0 | 225.0 | 106.0 | 23.3 | 0.0 | 1315.8 | 109.7 |
| 2007 | 0.0 | 0.0 | 17.6 | 171.0 | 243.0 | 158.0 | 83.7 | 168.0 | 236.0 | 152.0 | 97.5 | 0.0 | 1326.8 | 110.6 |
| 2008 | 6.8 | 52.0 | 0.0 | 58.1 | 175.0 | 115.0 | 142.0 | 117.0 | 263.0 | 209.0 | 35.3 | 1.7 | 1174.9 | 97.9 |
| 2009 | 0.0 | 0.0 | 6.3 | 64.5 | 204.0 | 159.0 | 128.0 | 161.0 | 170.0 | 94.5 | 0.0 | 0.0 | 987.3 | 82.3 |
| Total | 6.8 | 70.3 | 64.1 | 523.1 | 892.2 | 758.4 | 814.7 | 965.0 | 1290.0 | 657.8 | 273.1 | 72.1 | 6387.6 | 532.3 |
| Mean | 1.4 | 14.1 | 12.8 | 104.6 | 178.4 | 151.7 | 162.9 | 193.0 | 258.0 | 131.6 | 54.6 | 14.4 | 1277.5 | 106.5 |

Table 7.4 Monthly rainfall (mm) at Krabi (2008-2009).

Source: Thai Meteorological Department, Krabi.

| Year | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Total | Mean |
|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------|-------|
| 2008 | 70.9 | 42.8 | 149.8 | 122.3 | 221.2 | 290.5 | 156.1 | 96.3 | 217.5 | 254.8 | 132.3 | 53.8 | 1808.3 | 150.7 |
| 2009 | 40.5 | 16.9 | 258.3 | 122.3 | 216.5 | 129.0 | 150.3 | 157.2 | 206.0 | 225.3 | 131.1 | 37.4 | 1690.8 | 140.9 |
| Total | 111.4 | 59.7 | 408.1 | 244.6 | 437.7 | 419.5 | 306.4 | 253.5 | 423.5 | 480.1 | 263.4 | 91.2 | 3499.1 | 291.6 |
| Mean | 55.7 | 29.9 | 204.1 | 122.3 | 218.9 | 209.8 | 153.2 | 126.8 | 211.8 | 240.1 | 131.7 | 45.6 | 1749.6 | 145.8 |

Table 7.5 Mean monthly minimum and maximum temperatures ($^{\circ}\text{C}$) at Chiang Dao (2005-2009).

Source: Thai Meteorological Department, Chiang Mai.

| Year | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Mean |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Minimum 2005 | 11.5 | 14.6 | 14.6 | 19.3 | 21.3 | 23.0 | 22.3 | 21.8 | 21.5 | 20.3 | 15.7 | 12.0 | 18.2 |
| Maximum 2005 | 34.7 | 36.0 | 40.9 | 40.8 | 42.4 | 37.6 | 39.0 | 33.8 | 34.1 | 33.4 | 33.3 | 32.0 | 36.5 |
| Minimum 2006 | 11.2 | 14.4 | 18.3 | 19.5 | 18.3 | 21.2 | 22.3 | 22.6 | 21.9 | 19.7 | 14.0 | 9.8 | 17.8 |
| Maximum 2006 | 32.4 | 35.5 | 39.0 | 40.5 | 38.0 | 38.2 | 35.0 | 34.1 | 35.8 | 35.2 | 33.0 | 32.3 | 35.8 |
| Minimum 2007 | 11.7 | 12.0 | 14.5 | 19.9 | 21.4 | 22.3 | 21.1 | 22.9 | 22.1 | 19.5 | 14.1 | 12.5 | 17.8 |
| Maximum 2007 | 32.0 | 36.5 | 38.7 | 40.5 | 36.7 | 36.8 | 34.7 | 33.3 | 34.3 | 34.2 | 32.1 | 32.7 | 35.2 |
| Minimum 2008 | 12.3 | 14.2 | 18.3 | 21.2 | 21.6 | 22.7 | 23.4 | 23.1 | 22.0 | 22.1 | 13.3 | 11.5 | 18.8 |
| Maximum 2008 | 32.5 | 35.6 | 38.2 | 40.1 | 35.5 | 35.5 | 34.9 | 34.3 | 34.5 | 33.8 | 32.7 | 30.5 | 34.8 |
| Minimum 2009 | 10.9 | 15.1 | 16.8 | 21.4 | 22.4 | 22.6 | 22.5 | 23.0 | 23.0 | 21.4 | 14.9 | 13.2 | 18.9 |
| Maximum 2009 | 32.7 | 37.5 | 37.5 | 40.1 | 37.0 | 34.5 | 35.3 | 35.0 | 35.4 | 35.5 | 34.7 | 31.8 | 35.6 |

Table 7.6 Mean monthly minimum and maximum temperatures ($^{\circ}\text{C}$) at Krabi (2008-2009).

Source: Thai Meteorological Department, Krabi.

| Year | Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. | Mean |
|-----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Minimum 2008 | 18.0 | 19.0 | 20.6 | 21.6 | 21.6 | 20.2 | 19.8 | 19.2 | 19.0 | 18.6 | 17.7 | 18.6 | 19.5 |
| Maximum 2008 | 34.5 | 34.2 | 35.6 | 35.0 | 33.5 | 33.0 | 32.9 | 34.0 | 33.0 | 33.7 | 33.6 | 32.5 | 33.8 |
| Minimum 2009 | 15.3 | 16.3 | 23.1 | 22.1 | 21.7 | 21.4 | 21.3 | 20.8 | 20.5 | 20.0 | 20.0 | 18.5 | 20.1 |
| Maximum 2009 | 34.2 | 36.2 | 35.7 | 34.6 | 34.1 | 33.8 | 33.0 | 33.7 | 33.0 | 32.5 | 33.8 | 33.7 | 34.0 |

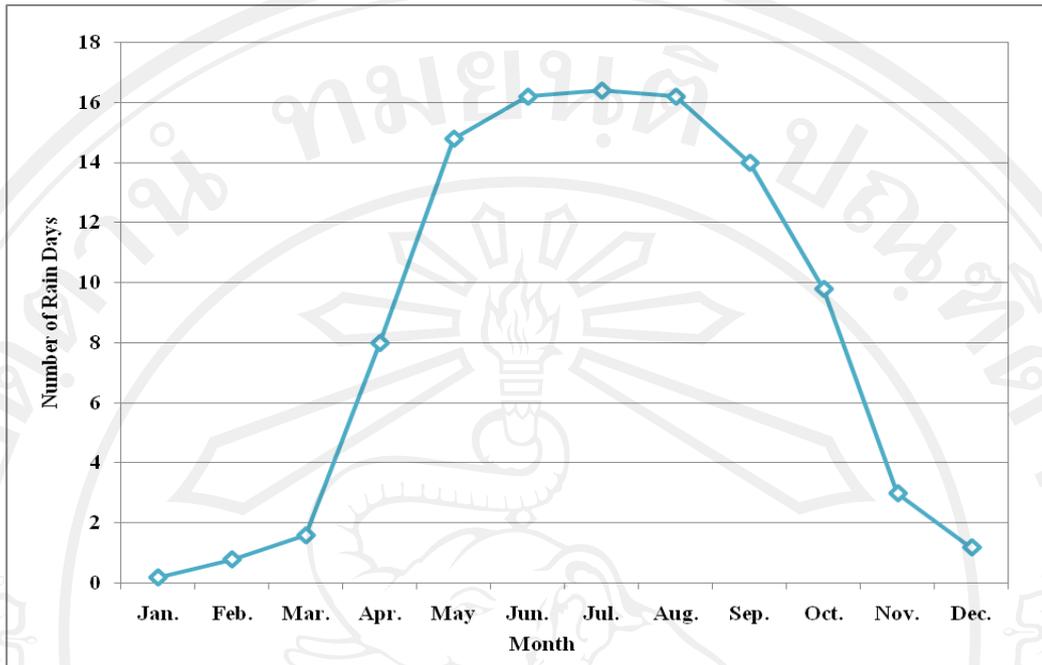


Figure 7.1 Average number of rainy days/month at Chiang Dao, 2005-2009.

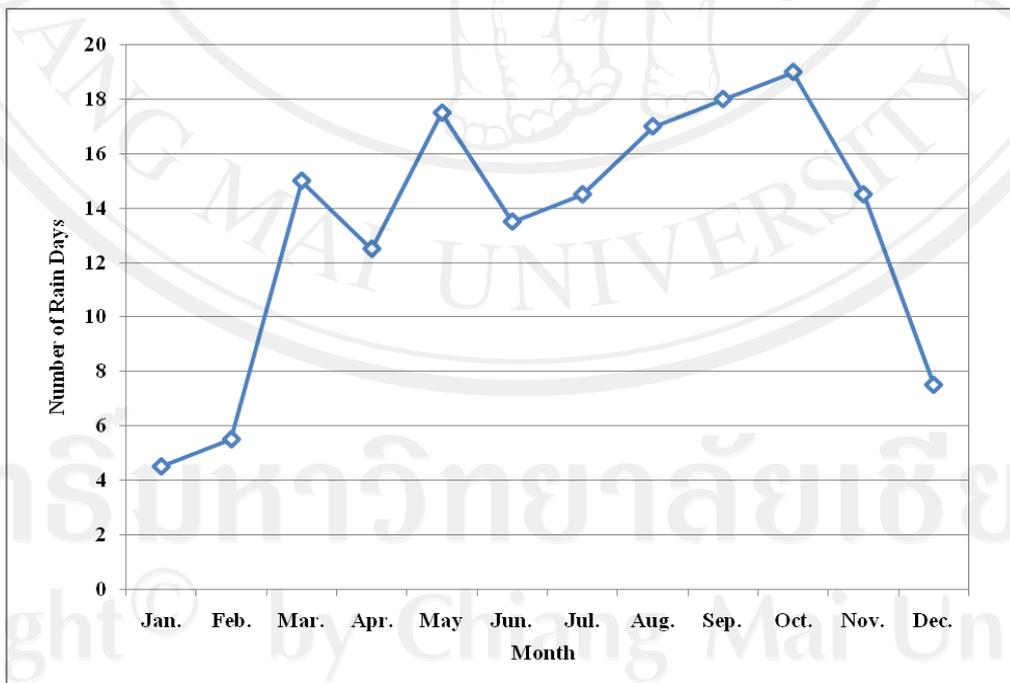


Figure 7.2 Average number of rainy days/month at Krabi, 2008-2009.

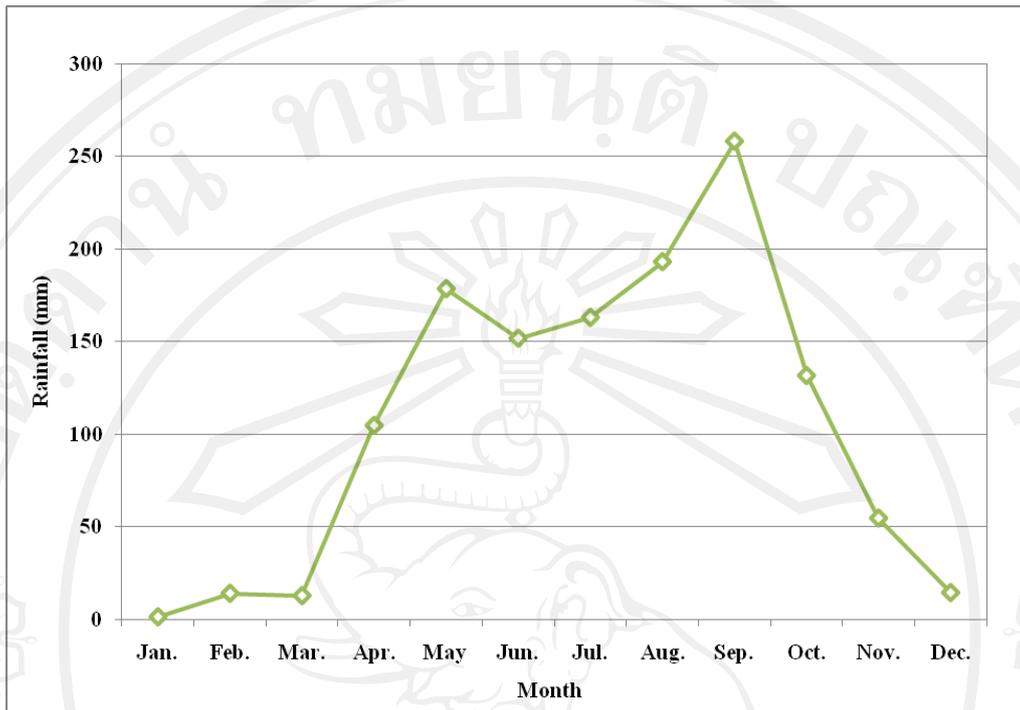


Figure 7.3 Average monthly rainfall (mm) at Chiang Dao, 2005-2009.

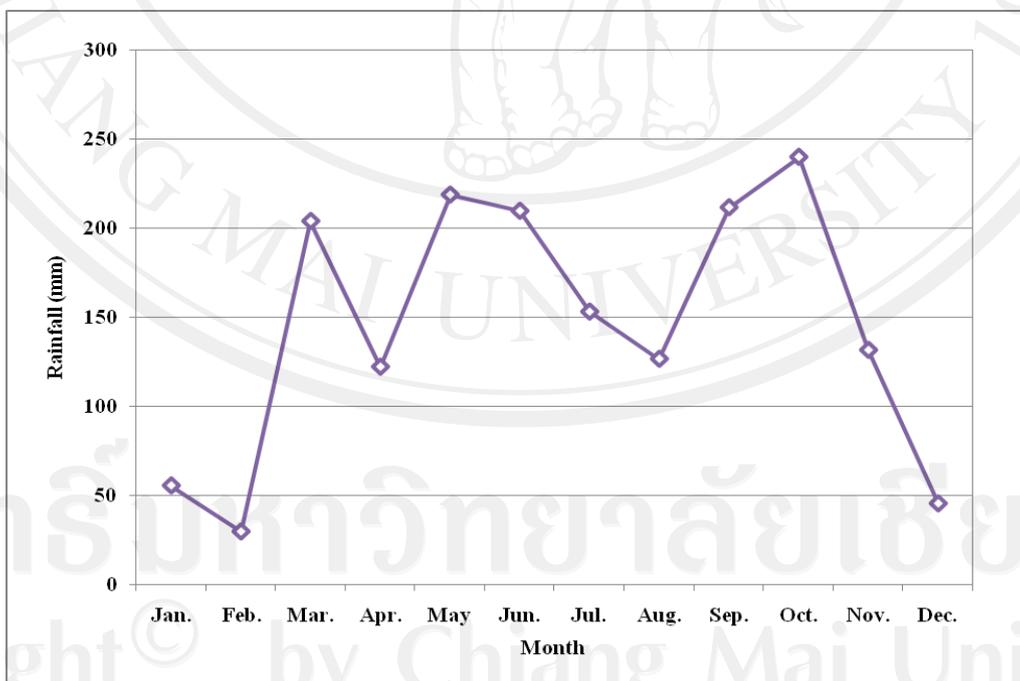


Figure 7.4 Average monthly rainfall (mm) at Krabi, 2008-2009.

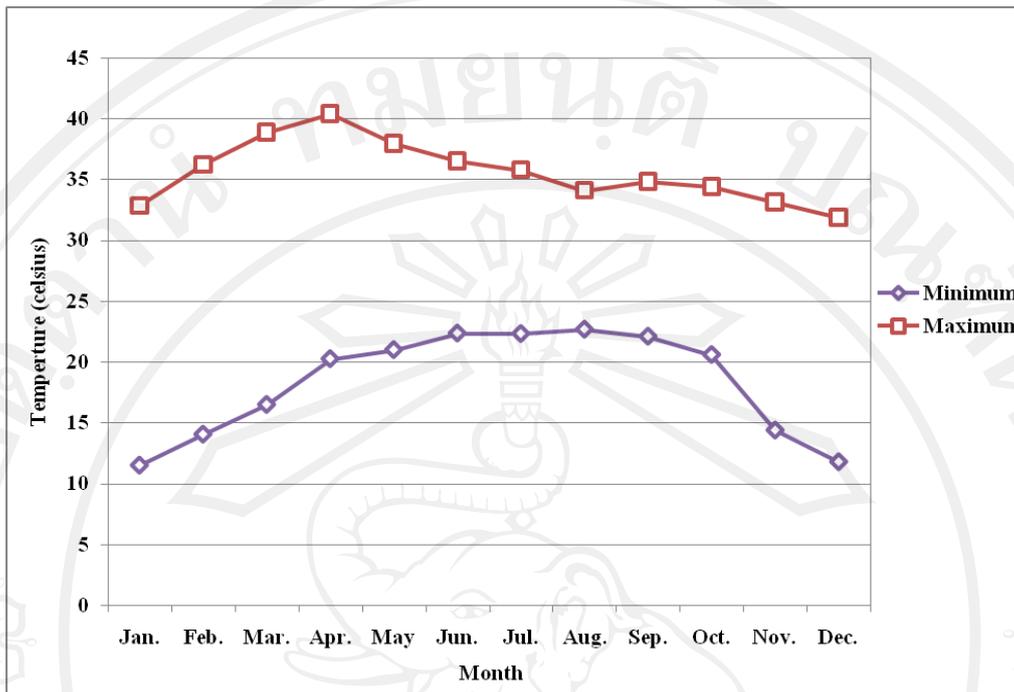


Figure 7.5 Mean monthly minimum and maximum temperatures ($^{\circ}\text{C}$) at Chiang Dao, 2005-2009.

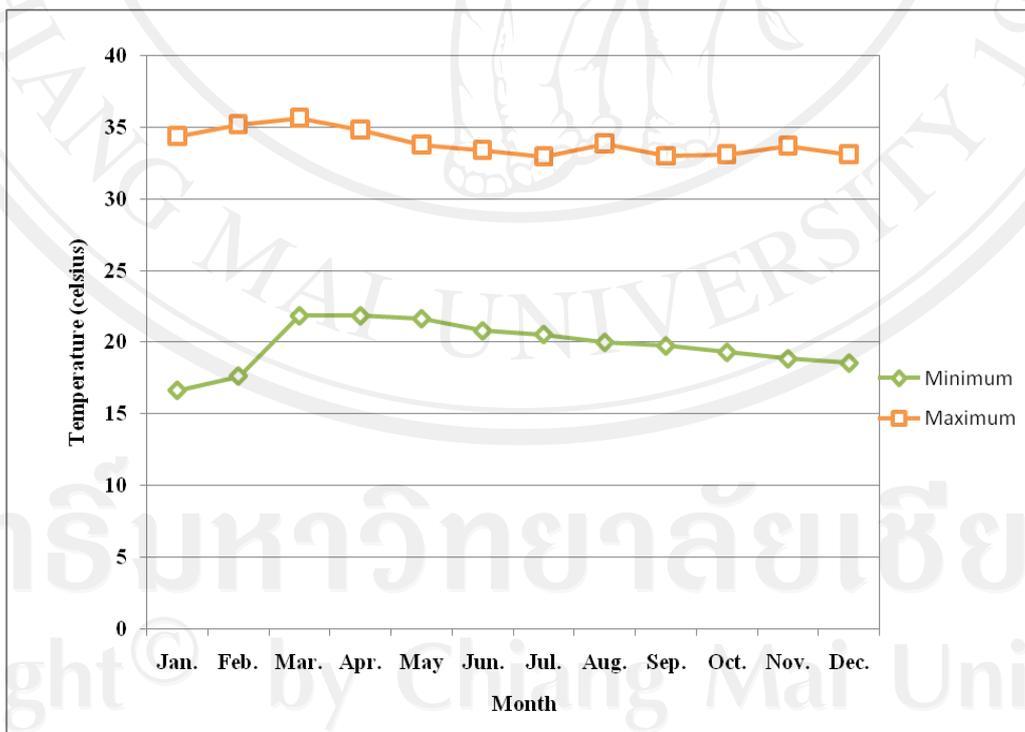


Figure 7.6 Mean monthly minimum and maximum temperatures ($^{\circ}\text{C}$) at Krabi, 2008 - 2009.

7.2 NEST SUPPORT PLANT CHARACTERISTICS

Thirty-six nests of the Asian Paradise Flycatcher were found from 2005 to 2009 at both study sites. Nests were located in a fork of small woody plant saplings near small, seasonally-dry streams, such as *Mallotus peltatus* (Geisel.) Mull. Arg. (Euphorbiaceae), *Miliusa thorelii* Finet & Gagnep. (Annonaceae), and *Ardisia sumatrana* Miq. (Myrsinaceae), except one nest in Trang Province which was located in a vine (Figures 7.7 - 7.11 and Table 7.7). Most of the nest support plant species were less than 3 m tall and had a fork at the nest site. The characteristics of nest support plants are presented in Table 7.8. The trunk diameter of nest plants at ground, at level 1.3 m, and at nest varied from 1.26 – 4.78, 0.39 – 2.18, and 0.67 – 2.02 cm, respectively. Nest plant height varied from 133–350 cm. The nest plants in shaded areas, usually hidden in dense shrubs and treelets at elevation ranging from 70 – 650 meters above sea level.



Figure 7.7 Nests and nest support characteristics of Asian Paradise Flycatcher at

A: Chiang Dao, B: Khao Pra-Bang Kham.



Figure 7.8 Nest plant characteristic with fork at the nest site with leaves to protect the nest at the Chiang Dao site.



Figure 7.9 A nest located on a vine species at Trang Province.



Figure 7.10 Nesting habitat near a small seasonal stream at Chiang Doa.



Figure 7.11 Nesting habitat near a small stream at Khao Pra-Bang Kham.

Table 7.7 Families and species of the nest plants of the Asian Paradise Flycatcher.

| Species No. | Nest No. | Male Type | Family | Botanical Name | Plant Habit |
|-------------|----------|-----------|---------------|-------------------------------------------------------------------------|--------------|
| 1 | N1 | RL | EUPHORBIACEAE | <i>Mallotus peltatus</i> (Geisel) Mull.Arg. | Shrubby Tree |
| 2 | N2 | RL | EUPHORBIACEAE | <i>Mallotus peltatus</i> (Geisel) Mull.Arg. | Shrubby Tree |
| 3 | N3 | RL | ANNONACEAE | <i>Mitrephora vandaeflora</i> Kurz | Tree |
| 4 | N4 | RS | SAPINDACEAE | <i>Lepisanthes tetraphylla</i> (Vahl) Radlk. | Tree |
| 5 | N5 | RL | BIGNONIACEAE | <i>Markhamia stipulata</i> Seem. Var. <i>stipulata</i> | Tree |
| 6 | N9 | RL | ANNONACEAE | <i>Milusa thorelii</i> Finet & Gagnep. | Shrub |
| 7 | N10 | RL | ANNONACEAE | <i>Milusa thorelii</i> Finet & Gagnep. | Shrub |
| 8 | N12 | RL | EUPHORBIACEAE | <i>Ostodes paniculata</i> Blume var. <i>paniculata</i> | Tree |
| 9 | N13 | RL | ANNONACEAE | <i>Milusa thorelii</i> Finet & Gagnep. | Shrub |
| 10 | N14 | RS | ANNONACEAE | <i>Polyalthia evecta</i> (Pierre) Finet & Gagnep. | Tree |
| 11 | N16 | RS | ANNONACEAE | <i>Milusa thorelii</i> Finet & Gagnep. | Shrub |
| 12 | N19 | RL | MORACEAE | <i>Ficus callophylla</i> Blume | Tree |
| 13 | N21 | RL | MYRISTICACEAE | <i>Knema tenuinervia</i> W.J. de Wilde | Tree |
| 14 | N22 | RL | URTICACEAE | <i>Boehmeria clidemioides</i> Mig. Var. <i>Clidemioides</i> | Shrub |
| 15 | N23 | RL | EUPHORBIACEAE | <i>Mallotus peltatus</i> (Geisel) Mull.Arg. | Shrubby Tree |
| 16 | N25 | RL | MELIACEAE | <i>Chukrasia tabularis</i> A.Juss. | Tree |
| 17 | N28 | RL | SAPINDACEAE | <i>Xerospermum noronhianum</i> (Blume) Blume | Tree |
| 18 | N29 | RL | EUPHORBIACEAE | <i>Drypetes roxburghii</i> (Wall.) Hurusawa | Tree |
| 19 | N30 | RS | RUBIACEAE | <i>Ixora cibdela</i> Craib | Shrubby Tree |
| 20 | N31 | RL | ANNONACEAE | <i>Mitrephora vandaeflora</i> Kurz | Tree |
| 21 | N32 | RL | ANNONACEAE | <i>Polyalthia simiarum</i> (Ham. Ex Hl. F. & Th.) Bth. Ex. Hk. F. & Th. | Tree |
| 22 | N33 | RL | EUPHORBIACEAE | <i>Mallotus peltatus</i> (Geisel) Mull.Arg. | Shrubby Tree |
| 23 | N34 | RL | EUPHORBIACEAE | <i>Mallotus peltatus</i> (Geisel) Mull.Arg. | Shrubby Tree |
| 24 | N36 | RL | EUPHORBIACEAE | <i>Ostodes paniculata</i> Blume var. <i>paniculata</i> | Tree |
| 25 | N38 | RL | ULMACEAE | <i>Celtis tetrandra</i> Roxb. | Tree |
| 26 | N40 | RL | MORACEAE | <i>Artocarpus lacucha</i> Roxb. | Tree |
| 27 | N41 | WL | MYRISTICACEAE | <i>Endocomia macrocoma</i> (Miq) Wilde ssp. <i>Praunii</i> (King) Wilde | Tree |
| 28 | N42 | RL | EUPHORBIACEAE | <i>Antidesma leucopodon</i> Miq. | Tree |
| 29 | N43 | RL | UNKNOWN | - | - |
| 30 | N44 | WL | MYRSINACEAE | <i>Ardisia sumatrana</i> Miq. | Shrub |
| 31 | N45 | WL | MYRISTICACEAE | <i>Horsfieldia macrocoma</i> Warb. var. <i>canarioides</i> Sinclair | Tree |
| 32 | N46 | WL | MYRSINACEAE | <i>Ardisia sumatrana</i> Miq. | Shrub |
| 33 | N47 | WL | UNKNOWN | - | Vine |
| 34 | N48 | WL | IXONANTHACEAE | <i>Ixonanthes icosandra</i> Jack | Tree |
| 35 | N49 | WL | EUPHORBIACEAE | <i>Glochidion eriocarpum</i> Champ | Shrubby Tree |
| 36 | N50 | RL | RUBIACEAE | <i>Ixora diversifolia</i> Wall. ex Kurz. | Shrubby Tree |

Table 7.8 Measurements of nest plants at both study areas.

| Species No. | Nest No. | Male type | Nest Height (cm) | Nest plant size characteristics | | | Number of forks at the nest | Elevation (m) | |
|-------------|----------|-----------|------------------|---------------------------------|--------------------|---------------|-----------------------------|---------------|---------|
| | | | | Height (cm) | Stem diameter (cm) | | | | |
| | | | | | At Base | At 1.3 m high | | | At Nest |
| 1 | N1 | RL | 150 | 220 | 2.30 | 1.65 | 1.55 | 2 | 550 |
| 2 | N2 | RL | 90 | 140 | 1.70 | 0.80 | 1.40 | 2 | 575 |
| 3 | N3 | RL | 157 | 240 | 2.24 | 1.20 | 1.10 | 2 | 600 |
| 4 | N4 | RS | 120 | 240 | 2.40 | 0.73 | 0.83 | 2 | 540 |
| 5 | N5 | RL | 100 | 190 | 1.90 | 1.21 | 1.30 | 2 | 550 |
| 6 | N9 | RL | 134 | 201 | 2.29 | 1.10 | 1.11 | 2 | 550 |
| 7 | N10 | RL | 145 | 210 | 1.95 | 1.05 | 1.00 | 2 | 500 |
| 8 | N12 | RL | 149 | 215 | 2.31 | 1.03 | 0.93 | 2 | 650 |
| 9 | N13 | RL | 145 | 195 | 2.10 | 0.99 | 0.89 | 4 | 500 |
| 10 | N14 | RS | 98 | 195 | 1.90 | 1.00 | 1.15 | 4 | 500 |
| 11 | N16 | RS | 89 | 133 | 1.39 | 0.90 | 1.01 | 2 | 500 |
| 12 | N19 | RL | 94 | 161 | 2.25 | 1.04 | 1.35 | 2 | 475 |
| 13 | N21 | RL | 121 | 200 | 2.47 | 1.05 | 1.47 | 2 | 575 |
| 14 | N22 | RL | 145 | 202 | 1.65 | 1.21 | 0.73 | 3 | 550 |
| 15 | N23 | RL | 137 | 208 | 1.37 | 0.49 | 0.82 | 2 | 500 |
| 16 | N25 | RL | 157 | 227 | 1.80 | 0.83 | 0.88 | 2 | 590 |
| 17 | N28 | RL | 156 | 231 | 1.99 | 1.06 | 1.50 | 2 | 520 |
| 18 | N29 | RL | 171 | 259 | 3.09 | 1.18 | 1.04 | 2 | 625 |
| 19 | N30 | RS | 102 | 165 | 1.83 | 1.22 | 1.45 | 2 | 550 |
| 20 | N31 | RL | 194 | 219 | 3.27 | 1.11 | 0.67 | 2 | 590 |
| 21 | N32 | RL | 118 | 207 | 2.27 | 0.73 | 0.92 | 2 | 600 |
| 22 | N33 | RL | 75 | 133 | 1.69 | 0.39 | 1.18 | 2 | 525 |
| 23 | N34 | RL | 162 | 239 | 1.79 | 0.98 | 0.94 | 2 | 550 |
| 24 | N36 | RL | 150 | 221 | 1.26 | 1.98 | 1.31 | 2 | 570 |
| 25 | N38 | RL | 225 | 323 | 4.52 | 1.26 | 1.09 | 2 | 590 |
| 26 | N40 | RL | 250 | 313 | 3.17 | 2.18 | 1.22 | 2 | 70 |
| 27 | N41 | WL | 184 | 207 | 4.78 | 1.50 | 1.66 | 2 | 80 |
| 28 | N42 | RL | 160 | 214 | 2.00 | 1.59 | 1.20 | 2 | 70 |
| 29 | N43 | RL | 209 | 309 | 3.43 | 2.12 | 2.02 | 2 | 75 |
| 30 | N44 | WL | 145 | 300 | 1.90 | 1.47 | 1.20 | 2 | 80 |
| 31 | N45 | WL | 125 | 285 | 1.94 | 1.50 | 1.25 | 1 | 150 |
| 32 | N46 | WL | 153 | 212 | 2.32 | 0.93 | 1.07 | 2 | 125 |
| 33 | N47 | WL | 200 | - | - | - | - | - | 125 |
| 34 | N48 | WL | 250 | 350 | 1.56 | 1.36 | 1.07 | 2 | 120 |
| 35 | N49 | WL | 158 | 258 | 1.85 | 0.95 | 0.78 | 2 | 85 |
| 36 | N50 | RL | 130 | 215 | 1.70 | 1.07 | 1.13 | 3 | 150 |

7.3 ECOLOGY OF NEST SITES AND RANDOM PLOT

The 1105 trees identified and measured from the twenty-five plots divided into three groups, viz. 11 plots of breeding success nests, 6 plots of unsuccessful nests, and 8 random plots placed 25 m from the nest plants (Table 7.9). Each plot was measured and presented by number of tree sampled, diameter at breast height (DBH), tree height (Table 7.10). Plots of unsuccessful nests contained the highest number of trees 58; whereas breeding success nests plots contained the lowest number with 35 trees (Figure 7.12). All plots at Chiang Dao had more trees than at Khao Pra Bang-Khram (Figure 7.13). Diameters at breast height for all groups of trees sampled are presented in Figures 7.14-7.15. The trunk diameters for 1-5 cm was the most abundant in all groups, but the other trunk diameters (5-15, 15-30, and >30) were similar in all groups. Trunk diameter at 1-5 cm. in Chiang Dao and Khao Pra Bang-Khram had the highest number of trees. Tree heights for all groups of trees sampled are shown in Figures 7.16-7.17. The height of 2-5 m had the highest number of individual in all groups at Chiang Dao area whereas, the height of category <2 m for in 3 plots with breeding success nests and plots of random sampling were highest in Khao Pra Bang-Khram.

Table 7.9 Three group of twenty-five sampling plots in two study areas. N1 = Plot of Nest No. 1, 1 = Random Sampling Plot of Plot 1.

| Plot with breeding success nests | | Plot with unsuccessful nest | | Random plots placed 25 m from nest plants | |
|----------------------------------|---------------------|-----------------------------|---------------------|-------------------------------------------|---------------------|
| Chiang Dao | Khao Pra-Bang Khram | Chiang Dao | Khao Pra-Bang Khram | Chiang Dao | Khao Pra-Bang Khram |
| N2, N23, | N43, N47 | N1, N22 | N40, N45 | 1, 2, 3 | 6, 7, 8 |
| N25, N28, | N50 | N31 | N46 | 4, 5 | |
| N30, N34, | | | | | |
| N36, N38 | | | | | |

Table 7.10 Number of trees in each plot around the nest and sampling plot classes by DBH and tree height.

| Plot No. | Male Type | Number of trees found | Number of trees in plot(10x10 m) around the nest, classes by DBH (cm) | | | | Number of trees in plot, classes by tree height (m) | | |
|----------|-----------|-----------------------|-----------------------------------------------------------------------|------|-------|-----|-----------------------------------------------------|-----|----|
| | | | <5 | 5-15 | 15-30 | >30 | <2 | 2-5 | >5 |
| N1 | RL | 88 | 81 | 4 | 3 | - | 53 | 27 | 8 |
| N2 | RL | 46 | 36 | 8 | 2 | - | 28 | 14 | 4 |
| N22 | RL | 50 | 43 | 4 | 3 | - | 10 | 31 | 9 |
| N23 | RL | 48 | 41 | 4 | 1 | 2 | 11 | 30 | 7 |
| N25 | RL | 26 | 20 | 1 | 4 | 1 | 7 | 11 | 8 |
| N28 | RL | 65 | 59 | 3 | 3 | - | 18 | 37 | 10 |
| N30 | RS | 51 | 39 | 9 | 1 | 2 | 10 | 21 | 20 |
| N31 | RL | 96 | 93 | 2 | - | 1 | 28 | 64 | 4 |
| N34 | RL | 47 | 33 | 11 | 3 | - | 9 | 23 | 15 |
| N36 | RL | 29 | 20 | 8 | - | 1 | 7 | 15 | 7 |
| N38 | RL | 19 | 10 | 5 | 3 | 1 | 2 | 7 | 10 |
| N40 | RL | 60 | 8 | 26 | 17 | 9 | 2 | 26 | 32 |
| N43 | RL | 31 | 27 | 2 | 1 | 1 | 18 | 8 | 5 |
| N45 | WL | 37 | 35 | 2 | - | - | 16 | 12 | 9 |
| N46 | WL | 19 | 18 | 1 | - | - | 12 | 5 | 2 |
| N47 | WL | 13 | 11 | 2 | - | - | 1 | 6 | 6 |
| N50 | RL | 19 | 17 | 1 | 1 | - | 12 | 5 | 2 |
| 1 | - | 77 | 65 | 10 | 2 | - | 28 | 36 | 13 |
| 2 | - | 41 | 31 | 9 | 1 | - | 6 | 22 | 13 |
| 3 | - | 47 | 34 | 11 | 2 | - | 11 | 16 | 20 |
| 4 | - | 57 | 46 | 7 | 2 | 2 | 16 | 25 | 16 |
| 5 | - | 68 | 56 | 9 | 3 | - | 18 | 32 | 18 |
| 6 | - | 21 | 19 | 2 | - | - | 10 | 8 | 3 |
| 7 | - | 30 | 29 | 1 | - | - | 11 | 13 | 6 |
| 8 | - | 20 | 18 | 1 | - | 1 | 13 | 6 | 1 |

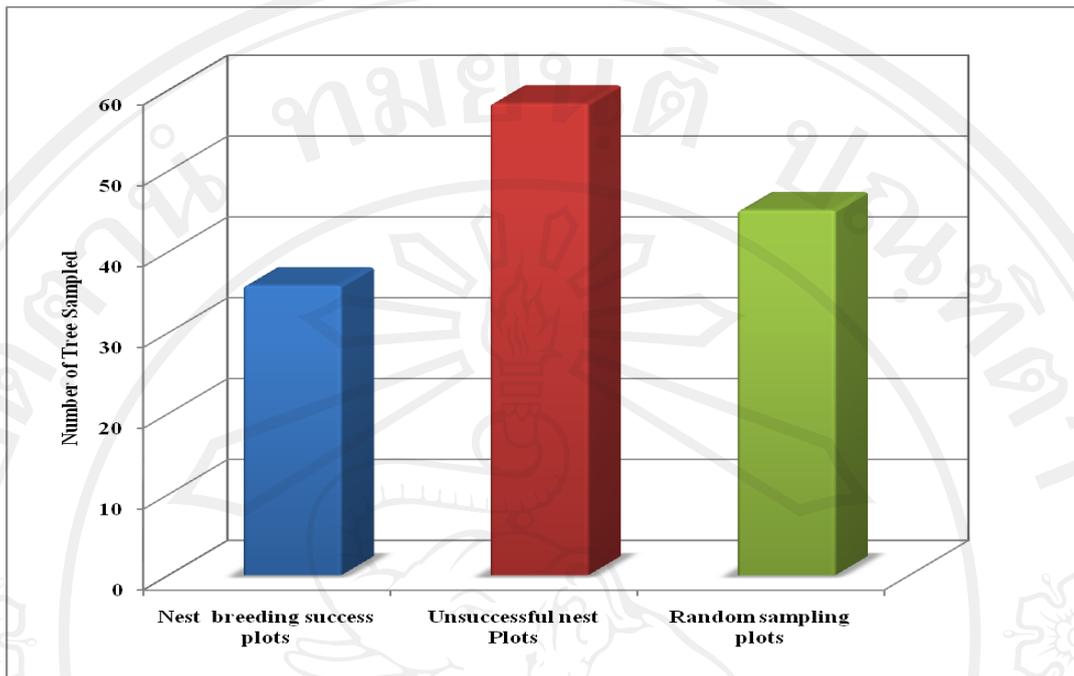


Figure 7.12 Total number of trees measured at both study sites.

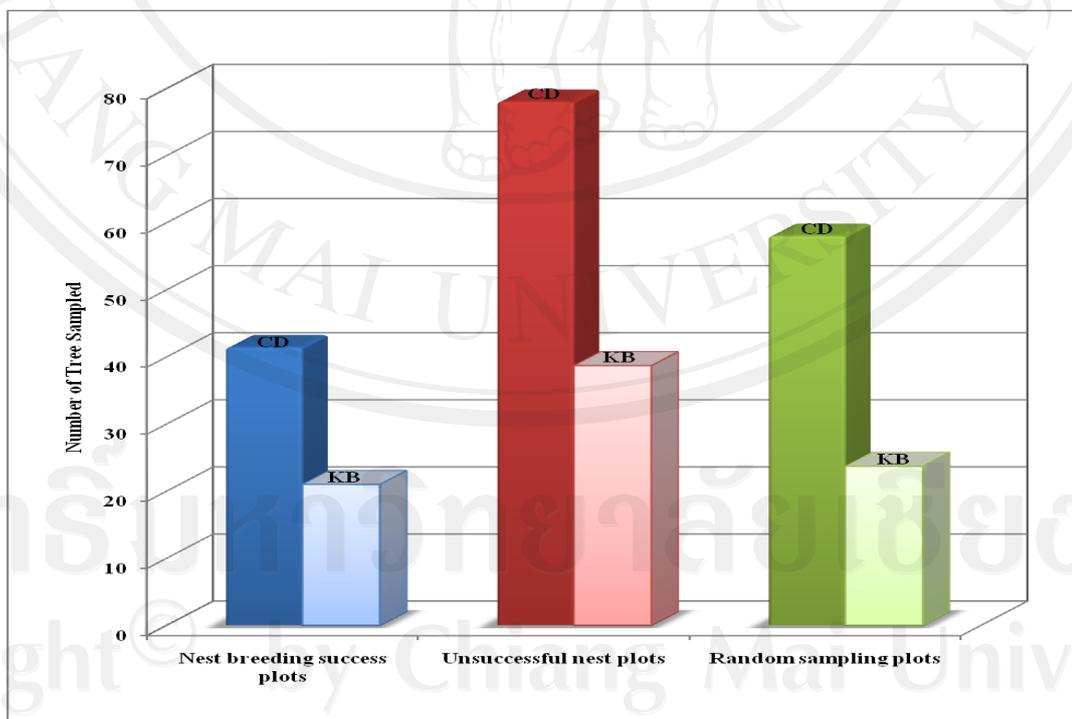


Figure 7.13 Comparison of the total number of trees in the plots, in Chiang Dao (CD) and Khao Pra-Bang Kham (KB).

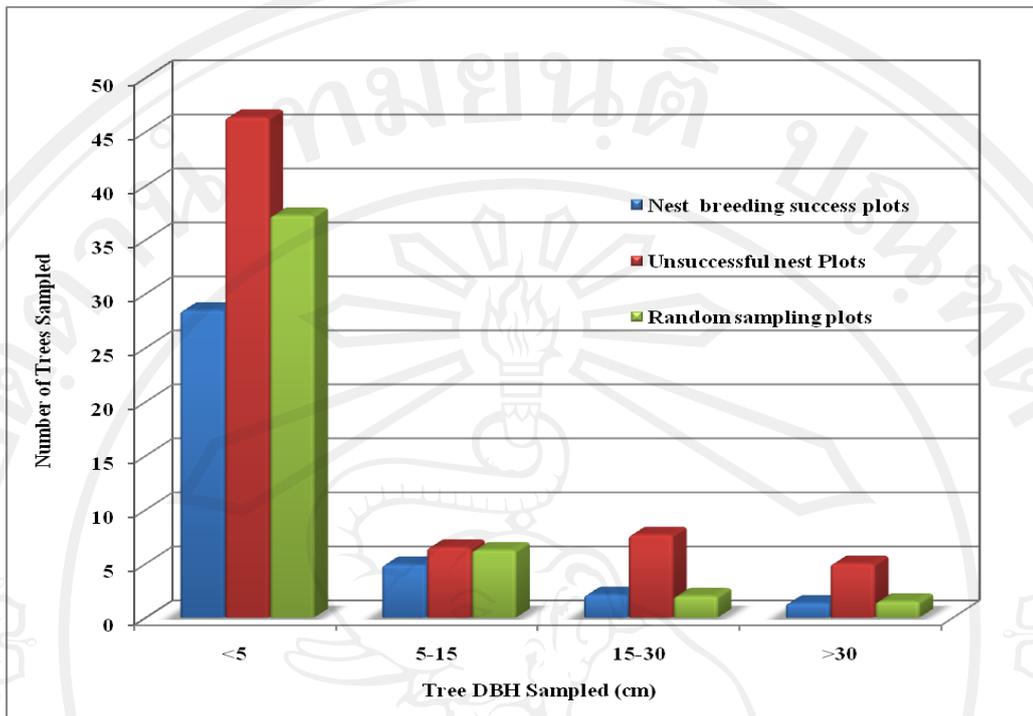


Figure 7.14 Number of trees in the plots classified by DBH(m) at both sites.

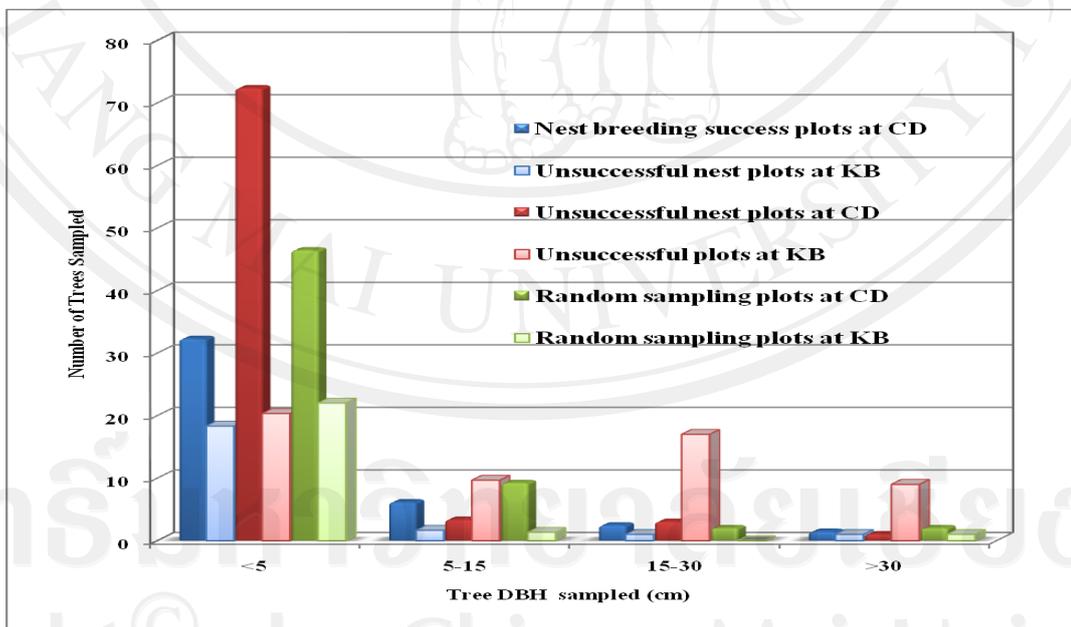


Figure 7.15 Number of trees in the plots classified by DBH(m) for Chiang Dao (CD) and Khao Pra-Bang Khram (KB).

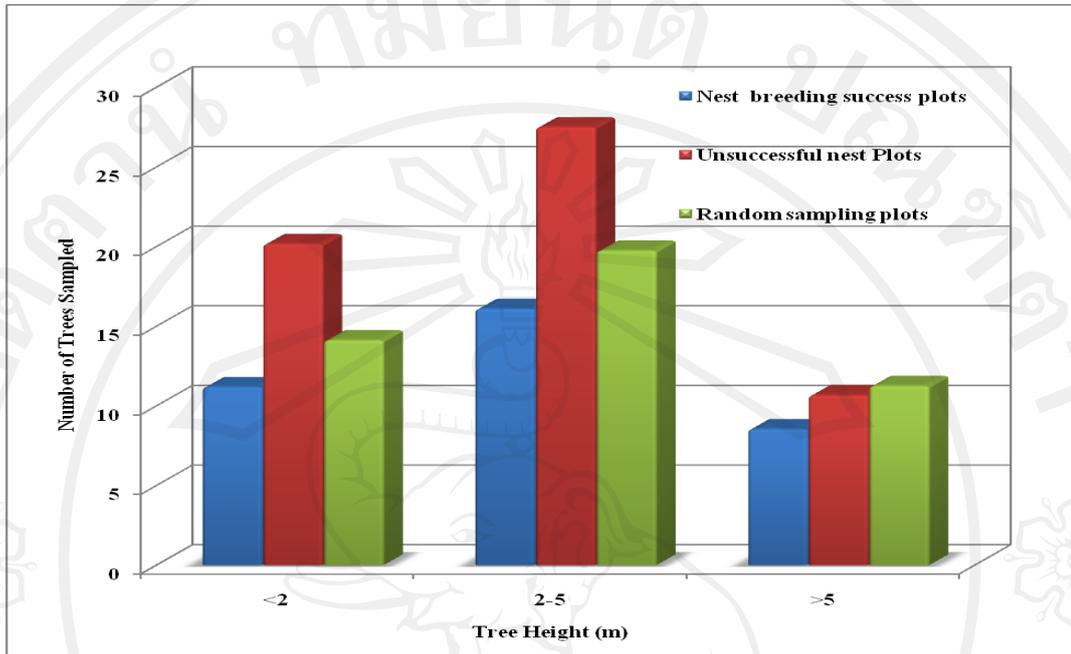


Figure 7.16 Number of trees in the plots classified by tree height (m) at both sites.

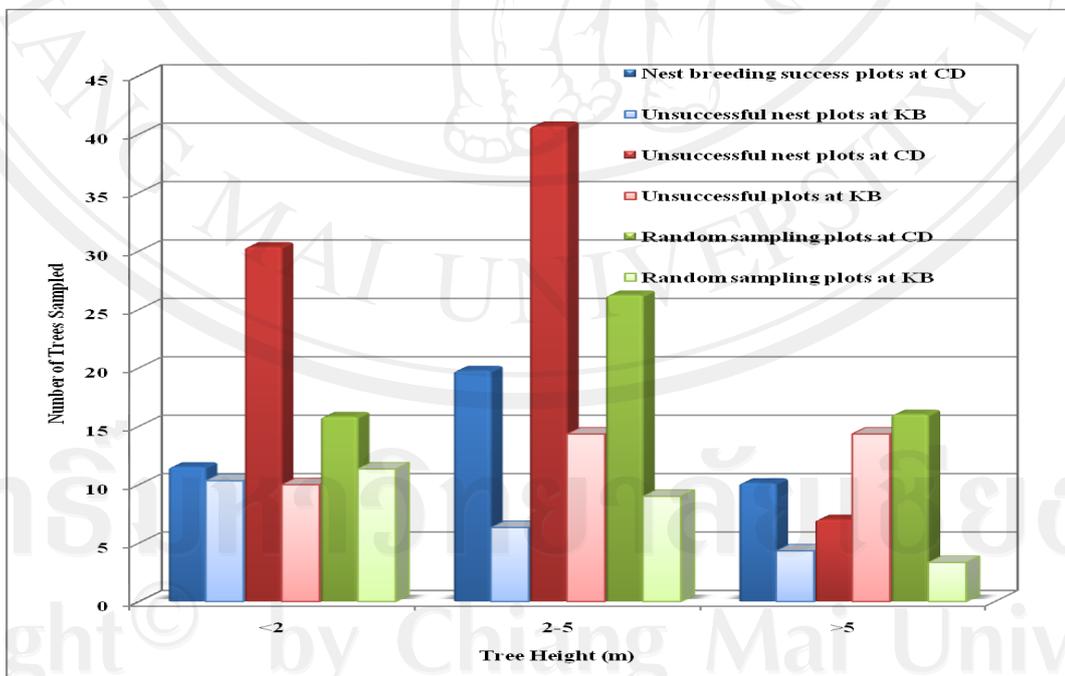


Figure 7.17 Number of trees in the plots classified by tree height (m) for Chiang Dao (CD) and Khao Pra-Bang Kham (KB).

7.4 CROWN COVER DIAGRAM OF THE NEST SITES AND RANDOM PLOTS

Seventeen sample plots of the twenty-five plots in both study areas were presented as crown cover diagrams to show the forest structure of the nesting sites around Asian Paradise Flycatcher nests and at random sites. The sample plots of 10 x 10 m and random plots placed 25 m from the nest plant support were random selected, centred at the nest plants. All plots were divided into three groups including; plots with nest breeding success, unsuccessful nests, and random plots. All plots of these three groups at Chiang Dao were similar with a dense crown cover of shrubs, saplings, and understorey trees, some plots in unsuccessful nests had higher with more canopy cover than the nesting site of nest breeding success and random plots at Khao Pra-Bang Kham. The percentages of canopy cover density in three groups at Chiang Dao were higher than Khao Pra-Bang Kham. All plots of three groups in two study areas were similar in forest structure with more high number of small trees and contained the trees with broad crown cover nearly tree site.