



## Annual Report of Butterfly Monitoring 2019-2020

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Since 2019 A Rocha is doing a butterfly monitoring in 2 transects around Cruzinha, in Ria de Alvor Nature 2000 (see Fig. 1). The data collected is also used in the ABLE project – Assessing Butterflies in Europe. The survey is done weekly under the appropriated weather conditions (no rain, no strong wind, and temperatures above 13<sup>o</sup> C).





Fig. 1- Map of transects I and II

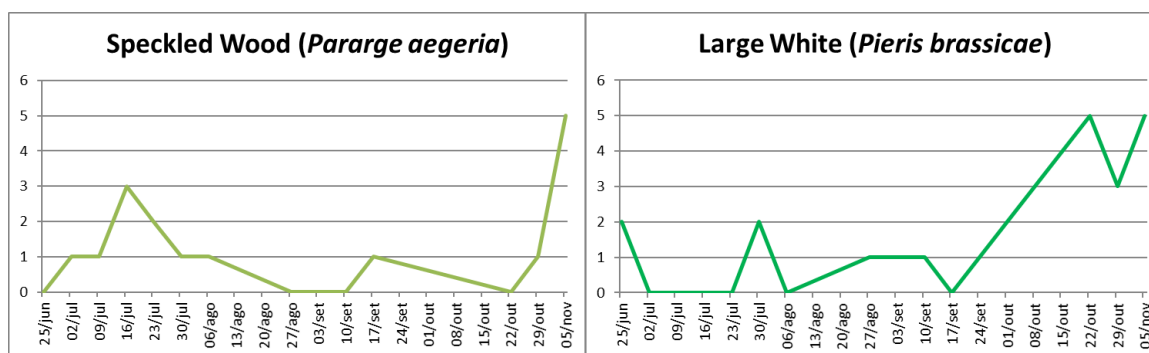
A total of 13 surveys were made between June and November 2019. We have counted 137 individuals from 4 different Families: Papilionidae, Pieridae, Nymphalidae and Lycaenidae and identified 14 different species. Some species are hard to identify when flying and sometimes is just possible to identify the Family or Genus (E.g. Pieridae or *Pieris* sp.) (Table 1).

Table 1- Total of Butterfly Species per visit between 25<sup>th</sup> June and 5<sup>th</sup> November 2019

Data	25/jun	02/jul	09/jul	16/jul	23/jul	30/jul	6/Aug	27/Aug	10/Sep	17/Sep	22/Oct	29/Oct	05/nov	Total
<i>Pieridae</i>	0	4	0	5	4	1	4	1	1	0	0	0	0	20
<i>Nymphalidae</i>	0	0	0	0	1	1	1	0	1	0	0	1	0	5
<i>Pieris</i> sp	0	0	2	0	0	0	0	0	0	2	0	0	0	4
<i>Euchloe</i> sp	0	0	2	0	0	0	0	0	0	2	0	0	0	4
<i>Papilio machaon</i>	0	0	0	1	1	0	0	0	1	0	0	0	0	3
<i>Gonepteryx cleopatra</i>	0	0	0	0	0	1	0	0	0	0	0	0	0	1
<i>Pieris brassicae</i>	2	0	0	0	0	2	0	1	1	0	5	3	5	19
<i>Pieris rapae</i>	0	0	0	0	0	0	0	0	0	0	0	3	0	3
<i>Lycaena phlaeas</i>	0	0	0	0	2	1	1	0	0	0	0	0	0	4
<i>Lampides boeticus</i>	1	0	0	0	0	0	0	0	3	0	0	0	0	4
<i>Cacyreus marshalli</i>	0	0	0	6	3	3	3	1	1	0	0	0	0	17
<i>Polymmatius icarus</i>	0	1	0	3	0	1	0	0	0	0	0	0	0	5
<i>Vanessa cardui</i>	0	0	1	0	0	0	0	0	0	1	0	1	0	3
<i>Vanessa atalanta</i>	0	0	0	0	0	0	0	0	0	0	1	0	1	2
<i>Pararge aegeria</i>	0	1	1	3	2	1	1	0	0	1	0	1	5	16
<i>Pyronia cecilia</i>	2	5	2	0	3	1	3	0	0	2	0	0	0	18
<i>Pyronia tithonus</i>	0	0	0	3	0	1	0	0	0	0	0	0	0	4
<i>Maniola jurtina</i>	0	0	1	0	0	0	1	0	1	1	0	0	1	5
<b>Total (Summary)</b>	<b>5</b>	<b>11</b>	<b>9</b>	<b>21</b>	<b>16</b>	<b>13</b>	<b>14</b>	<b>3</b>	<b>9</b>	<b>9</b>	<b>6</b>	<b>9</b>	<b>12</b>	<b>137</b>

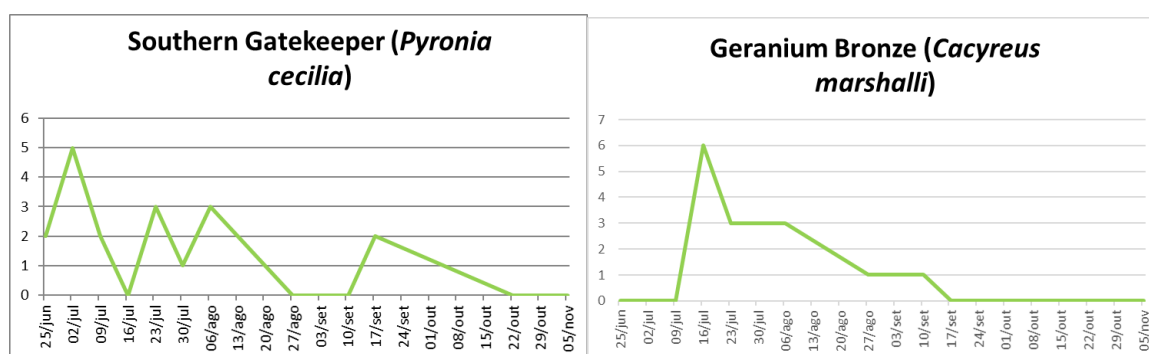
The most abundant Family was Nymphalidae with 38% of all the observations, followed by the Pieridae Family (32%). The most abundant species (observed in larger numbers) were the Large White (*Pieris brassicae*), the Southern Gatekeeper (*Pyronia cecilia*), the Geranium Bronze (*Cacyreus marshalli*) and the Speckled Wood (*Pararge aegeria*).

The most common species (observed more often in each visit) were the Speckled Wood (*Pararge aegeria*) (Graphic 1), present in 69% of the visits, followed by Large White (*Pieris brassicae*) (Graphic 2) and Southern Gatekeeper (*Pyronia cecilia*) (Graphic 3) seen in 53% of the visits and by the Geranium Bronze (*Cacyreus marshalli*) (Graphic 4), present in 46% of the visits.



Graphic 1 – Total number of Speckled Wood per visit in 2019

Graphic 2 – Total number of Large White per visit in 2019



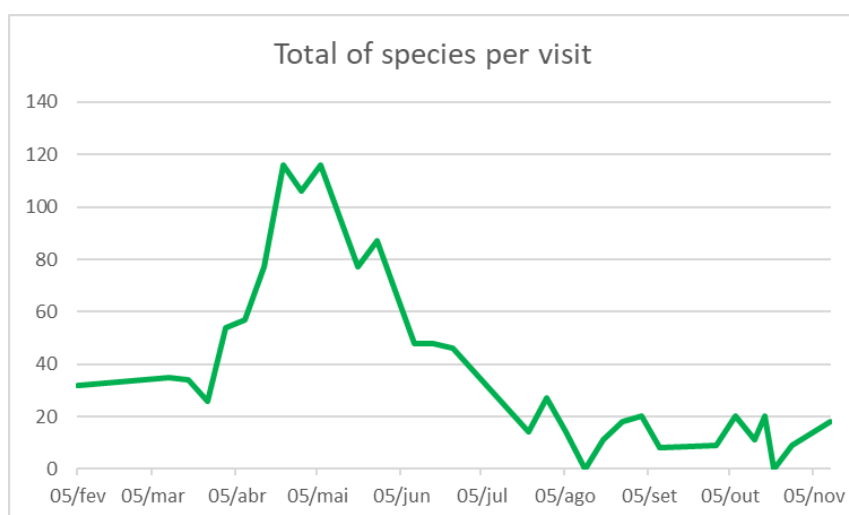
Graphic 3 – Total number of Southern Gatekeeper per visit in 2019

Graphic 4 – Total number of Geranium Bronze per visit in 2019

In 2019 the survey started in the end of the Spring, so the diversity and abundance of species is lower since most species occurred in Spring when the availability of food is greater.

A total of 29 surveys were made in 2020 between February and November. We have counted 1225 individuals from 5 different Families: Hesperidae, Papilionidae, Pieridae, Lycaenidae and Nymphalidae. Most of the observations happened in April, May, and June, with a peak in the end of April beginning of May (Graphic 5).

27 different species were identified, the most abundant were the Small White (*Pieris rapae*), the Meadow Brown (*Maniola jurtina*), the Clouded Yellow (*Colias crocea*) and the Speckled Wood (*Pararge aegeria*) (Table 2).

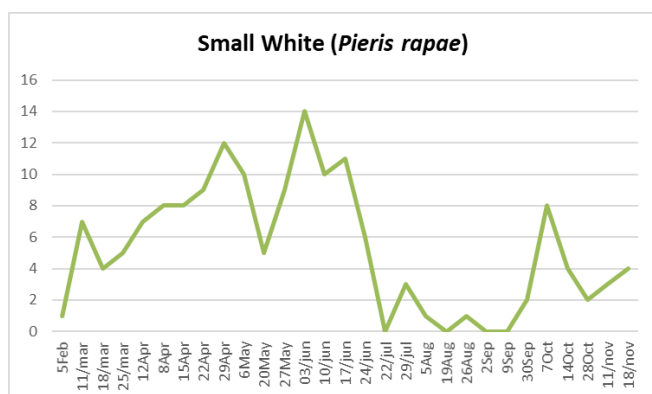


Graphic 5 – Total of butterflies per visit between February and April 2020

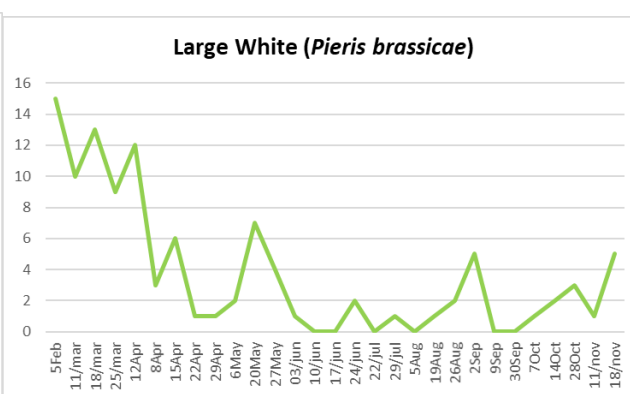
Table 2- Total number of species between February and November 2020

Species	Total	Species	Total
<i>Hesperiidae</i>	1	<i>Lycaena phlaeas</i>	49
<i>Pieridae</i>	37	<i>Leptotes pirithous</i>	7
<i>Lycaenidae</i>	21	<i>Lampides boeticus</i>	5
<i>Nymphalidae</i>	5	<i>Cacyreus marshalli</i>	21
<i>Thymelicus sp</i>	27	<i>Celastrina argiolus</i>	1
<i>Pieris sp</i>	28	<i>Aricia cramera</i>	10
<i>Euchloe sp</i>	53	<i>Polyommatus icarus</i>	32
<i>Pyronia sp</i>	7	<i>Vanessa cardui</i>	5
<i>Thymelicus lineolus/sylvestris</i>	2	<i>Vanessa atalanta</i>	19
<i>Papilio machaon</i>	23	<i>Danaus plexippus</i>	3
<i>Thymelicus acteon</i>	2	<i>Coenonympha pamphilus</i>	2
<i>Carcharodus alceae</i>	1	<i>Pararge aegeria</i>	99
<i>Gonepteryx cleopatra</i>	14	<i>Lasiommata megera</i>	3
<i>Colias crocea</i>	127	<i>Melanargia ines</i>	94
<i>Pieris brassicae</i>	107	<i>Pyronia cecilia</i>	62
<i>Pieris rapae</i>	154	<i>Pyronia tithonus</i>	11
<i>Euchloe belemia</i>	30	<i>Maniola jurtina</i>	153
<i>Euchloe crameri</i>	10	<b>Total</b>	<b>1225</b>

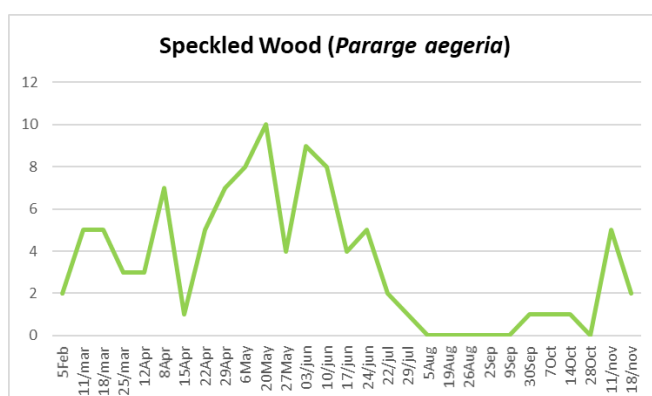
The most common species in 2020, seen in most part of the visits, were the Small White (*Pieris rapae*) (Graphic 6), seen in 86% of the visits, the Large White (*Pieris brassicae*) (Graphic 7) and the Speckled Wood (*Pararge aegeria*) (Graphic 8) seen in 79% and the Clouded Yellow (*Colias crocea*) (Graphic 9), seen in 62% of the visits.



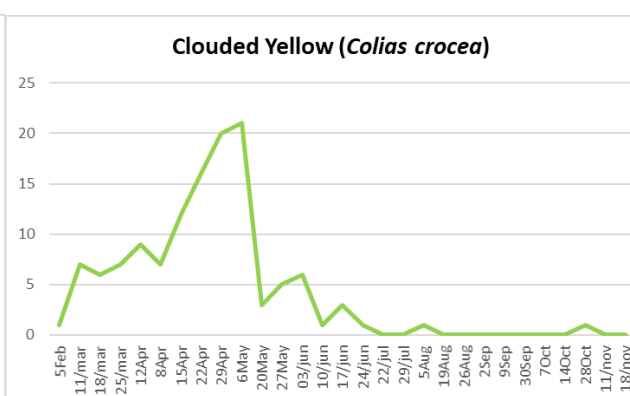
Graphic 6 – Total number of Small White per visit in 2020



Graphic 7 – Total number of Large White per visit in 2020



Graphic 8 – Total number of Speckled Wood per visit in 2020



Graphic 9 – Total number of Clouded Yellow per visit in 2020

The highest number of individuals of the same species seen in a single visit was 47, from the Meadow Brown (*Maniola jurtina*). The most uncommon species seen only once (1 single individual) were the Mallow Skipper (*Carcharodus alceae*) and the Holly Blue (*Celastrina argiolus*). The Family with more species seen was the Nymphalidae, with 10 different species and the Family with more individuals was the Pieridae, with 560 (Table 3).

Table 3- Total number of species and individuals per Family in 2020

Families	Total of species	Total of individuals
<b>Hesperiidae</b>	2	33
<b>Papilionidae</b>	1	23
<b>Pieridae</b>	6	560
<b>Lycaenidae</b>	7	146
<b>Nymphalidae</b>	10	463

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