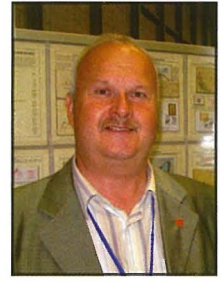


INTERESTING OBSERVATIONS ABOUT THE SMALL TORTOISESHELL BUTTERFLY

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The Small Tortoiseshell butterfly may have been present on Earth longer than any other butterfly species - a mid-Miocene fossil of *Aglais karaganica* estimated at 15 million years old is so similar to the modern day *Aglais urticae* as to be virtually indistinguishable! 16th century English naturalist Thomas Moffett once said that colourful, gem-studded Small Tortoiseshell butterfly showed off ‘the elegance of nature’.

The Small Tortoiseshell (*Aglais urticae*) is a colourful eurasian butterfly in the family Nymphalidae. The Small Tortoiseshell butterfly is a rare resident species for the Maltese Islands (**Figure 1 – Stamp of Malta 2000 with the Small Tortoiseshell butterfly**). But this species is well known and widespread from the Atlantic coast of



Figure 1

Europe through to the pacific coast of Asia. The wingspan is generally 45-60mm. The upper side is dark red with black and yellow stain like markings (**Figure 2 – Colour error and normal stamp of Poland 1967 with the Small Tortoiseshell butterfly**). The slightly scalloped wings have a series of blue spots close to the side and hind margins. The undersides are



Figure 1

less colourful, the pattern on the forewing being a duller reflection of the upper-side (**Figure 3 – Imperforated stamp of Great Britain 1981 with the Small Tortoiseshell butterfly**). This species resting with its wings closed but will open and close them rapidly, flashing their bright colours to confuse and alarm predators. The wings of Tortoiseshell butterflies help conceal them extremely well from predators. When closed, their wings look like leaves, helping them to hide. On the ground, it may take birds up to 30 minutes

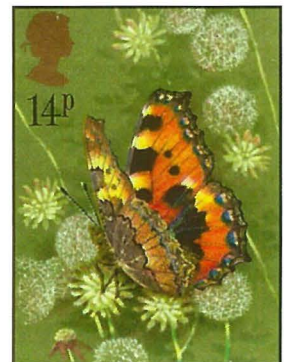


Figure 3

to see them. In addition to this, when discovered, tortoiseshell butterflies will flick their wings open to reveal bright colours. While they don't have eyespots like many other butterflies, these bright contrasting colours can often scare a predator, giving the tortoiseshell butterfly ample time to escape. Not only does this colouration tend to frighten birds, it can also act as a warning. The bright red colouration serves as a cautionary sign to the predator about the poor taste of the butterfly. Tortoiseshell butterflies tend to be unpalatable to birds. If a bird sees this bright red colouring, then they will be less likely to eat the butterfly.

Butterfly is found throughout temperate Europe, Asia Minor, Central Asia, Siberia, China, Nepal, Sikkim Himalayas in India, Mongolia, Korea and Japan, wherever common nettle, which their larvae feed on, is found (**Figure 4 – Imperforated stamp of Hungary 1961 with the Small Tortoiseshell butterfly on nettle background**).



Figure 4

This lovely butterfly is probably one of European's most familiar butterflies because appears in early spring. The species has one of the longest seasons of any Eurasian butterfly, extending from early spring to late autumn. Adults overwinter in hibernation, emerging on the first warm sunny days of the year to mate and breed. This is one of the few butterflies that hibernate as adults. Typically this butterfly will try to hibernate in dark sheltered locations such as tree crevices or outbuildings like garages and sheds. During hibernation tortoiseshell butterflies are able to supercool in order to keep from freezing. In sheltered areas, these butterflies can stand up to -21 degrees

Celsius without freezing.

Small Tortoiseshells are one of the prettiest, and luckily one of commonest butterflies which have shown little overall change in range (**Figure 5 - Old envelope of Germany post passed in 1871 and decorated with the image of the Small Tortoiseshell butterfly**).



Figure 5

Small Tortoiseshell larvae (caterpillars) eat the leaves of nettles. Adults feed on nectar from a wide variety of flowers, using their long proboscis like a drinking straw



Figure 6

to suck up nectar. An avid feeder, it will take nectar from flowers wherever they are found frequently in gardens and towns (**Figure 6 – Booklet of Alderney 1997 with**

feeding the Small Tortoiseshell butterflies). In order to obtain the nectar, the butterfly must be able to recognize distinct floral aromas and colours. The small tortoiseshell butterfly is able to differentiate between various flowers through visual signals. Tortoiseshell butterflies in particular tend to prefer colours at both ends of the visible light spectrum for humans, 400 nm and 600 nm. These correspond to the colours violet and red respectively. This ability comes from their compound eye. The flowers depend on the butterflies for pollination, so it is a mutually beneficial relationship.

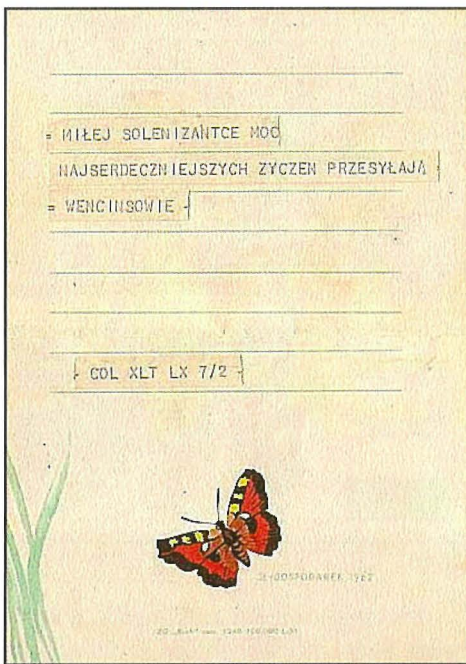


Figure 7

The Small Tortoiseshell is a highly mobile species which can occur in almost any habitat, including woodlands, grasslands, heaths, gardens, country lanes, and even in city centres. It is a strong flyer, with high powers of dispersal, reaching remote islands and high mountain peaks (**Figure 7 – Stationery card of Japan 1998 with the Small Tortoiseshell butterfly flying in mountain snow**). Adults have been recorded at altitudes as high as 3000 m in the Alps, and in the Himalayas at an altitude above 5000 m above sea level.

The Small Tortoiseshell is also a migrant butterfly. During migration, tortoiseshell butterflies position themselves in accordance with air

Figure 8



currents; they only start migration at certain wind speeds. They are able to do this because of an extra sensory organ in their antennae. Because their host plants grow in widely distributed areas, tortoiseshell butterflies tend to move around more than some other butterflies (**Figure 8 - Telegramme of Poland 1962 with flying the Small Tortoiseshell butterfly**).

The common name ‘tortoiseshells’ refers to the upper side of the wings of the butterflies (**Figure 9 – Unadopted original artwork of Mongolia 1963 with yellowish brown colour of the upper side of the wings of the Small Tortoiseshell butterfly**) resembling the mottled yellowish brown ‘tortoiseshell’ of some sea turtles, which is sometimes used for making combs. This butterfly’s scientific name, *Aglais urticae*, is partly



Figure 9

derived from *urtica* meaning stinging nettle. *Aglaia* was one of the three Graces, a daughter of Zeus admired for her beauty, and the choice of this name reflects the elegance of the Small Tortoiseshell butterfly.



Figure 10

The Small Tortoiseshell is among the most well-known butterflies in Europe. The striking and attractive patterning and its appearance at almost any time of the year in urban areas and in the countryside have made it a familiar species. Since it is also a very beautiful and eye-catching butterfly, it was chosen as the national butterfly of Denmark in 1991 (**Figure 10 – Stationery card of Denmark 1993 with the indication National Butterfly the Small Tortoiseshell**). It is one of the first butterflies to be seen in spring and in the autumn it often visits garden flowers in large numbers.

Famous Russian painter Alexey Gavrilovich Venetsianov, renowned for his paintings devoted to peasant life and ordinary people, painted the painting “The Reapers” with the small tortoiseshell butterflies in 1820 (Figure 11 – Maximum card of USSR 1968 with the Small Tortoiseshell butterflies on the painting of Venetsianov “The Reapers”).

Once among the most common butterflies in Europe and temperate Asia, this butterfly is in very rapid decline, at least in Western Europe. This decline can be explained by environmental degradation, air pollution, contamination by pesticides. This butterfly may then be sensitive to global warming (Figure 12 – Fascinating the Small Tortoiseshell butterfly on the stamp of Bahrain 1994).

The visual elements in natural environments such as sunsets, streams, and especially beautiful butterflies (Figure 13 – Entire postal of USSR with beautiful Small Tortoiseshell butterfly) are reduce stress and mental fatigue. Fascinating but not too demanding, such stimuli promote a gentle, soft focus that allows our brains to wander, rest, and recover from so named the “nervous irritation” of city life.

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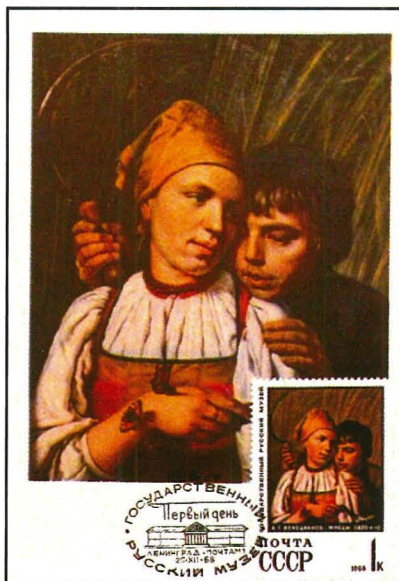


Figure 11



Figure 12



Figure 13

philatelic exhibits on butterflies and moths. His address: Vladimir Kachan, street Kulibina 9-49, Minsk-52, BY-220052, Republic of Belarus, E-mail: vladimirkachan@mail.ru