

UNOFFICIAL



Butterflies and Moths of the World

Developed by Carol Quashie-Williams, MSc (Entomology), DIC FRES, STEM Professional in Schools, Assistant Director, Department of Agriculture, Fisheries and Forestry. Email: Carol.Quashie-Williams@aff.gov.au

Butterflies and moths are one of the most damaging groups of agricultural pests. These playing cards promote and raise awareness of butterfly and moth species of the world and include butterflies and moths that are pests, endangered and/or have First Nations significance. Students from Primary Schools throughout Australia including the Torres Strait Islands and children connected to DAFF staff, provided the artwork as part of a STEM Professionals in Schools project.

UNOFFICIAL



We acknowledge the Traditional Custodians of the ACT, the Ngunnawal & Ngambri people. We acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

Acknowledgements

- This STEM Professionals in Schools “*STAM*” (Science, Technology, *Arts* and Maths) project could not have been achieved without the commitment and fabulous artwork from primary students from Tagai State College Junior School, Torres Strait Island, Namadgi and Farrer Primary Schools students and teachers, Mrs Lydia Desmet, Mrs Kathryn Glanville and Mrs Julie White, Namadgi Primary School and Mr Aaron Flynn, Farrer Primary School, in Canberra, Australia and the support of the staff of the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF).
- Special thanks for helping to sketch the outlines of the species:
 - Hannah Wilson and Bronte Calvert, DAFF Grads 2023 and Adam-1 Herden, DAFF Grad 2022.

Introduction

- Butterflies and moths are one of the most damaging groups of agricultural pests.
- This pack contains butterflies and moths that are exotic National Priority Plant Pests, Australian domestic pests, CITES endangered species and species important to First Nations.
- Butterflies and moths are the adult stages of insects in the Lepidoptera (“scaled wings”) order. Lepidoptera have four life stages: egg, larva (or caterpillar), pupa, and adult (butterfly or moth). Butterfly and moth adults have 2 sets of wings, that come in a variety of colours and patterns, produced by the tiny scales covering their wings.
- The card suits represent all different coloured **Butterflies and Moths**, grouped as follows:
 - ♥ Red and Orange,
 - ♠ White and Mixed ,
 - ♦ Black and Brown and
 - ♣ Blue and Green.
- The cards contain information on the sizes (mm) of egg, larva, pupa and adult wingspan of butterfly and moth species.

Instructions – Butterfly & Moth Game

For 2-6 Players

- Shuffle and deal out all the cards, including the Jokers, face down to each player.
- Players turn over their top card.
- The dealer starts and selects a category of egg, larva, pupa or wingspan and reads out the name of their butterfly or moth and number for the category.
- Each player reads out their butterfly or moth name and number for the chosen category.
- The winner of the hand is the player with the highest number.
- **OR** the player with a **Joker** card (the **Joker** 'trumps' or beats the highest number).
- (If two or more cards have the same category number, players turn over the next top card and read out the number of the same category).
- The winner then collects all the cards of that game.
- The player to the left of the dealer then turns over their top card and selects a category.
- Each player has a turn to select a category.
- The winner of the game is the player with the most cards.

Hope you enjoy playing the Butterflies and Moths of the World Game,
if you have any comments or suggestions please email me Carol.Quashie-Williams@aff.gov.au

Printing Instructions

Print single-sided on A4 paper or card 200-300 gsm:

- Pages 8-9, ♥ Red and Orange
- Pages 11-12, ♦ Black and Brown
- Pages 14-15, ♠ White and Mixed
- Pages 17-18, ♣ Blue and Green.

Page 19 to print the backs of the playing cards

Page 20 to print the playing card box template

♥ Red and Orange

A

Danaus plexippus
Monarch butterfly



Egg (mm)	0.9
Larva (mm)	45
Pupa (mm)	30
Wingspan (mm)	93

**W**

Source: Charles Weston Primary School

K

Attacus atlas
Atlas moth



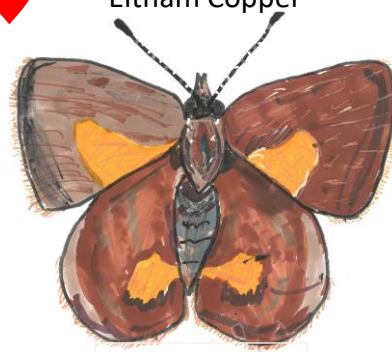
Egg (mm)	2.5
Larva (mm)	115
Pupa (mm)	80
Wingspan (mm)	240

**Y**

Source: Amy, DAFF Grad 2023

Q

Paralucia lucida
Eltham Copper



Egg (mm)	1.0
Larva (mm)	18
Pupa (mm)	14
Wingspan (mm)	27

**O**

Source: Matilda, DAFF, Ainslie Primary School

J

Synemon plana
Golden Sun Moth



Egg (mm)	2.0
Larva (mm)	20
Pupa (mm)	21
Wingspan (mm)	34

**P**

Source: CQW, DAFF staff

10

Vanessa kershawi
Australian painted lady



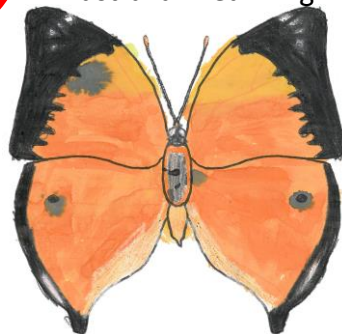
Egg (mm)	0.5
Larva (mm)	30
Pupa (mm)	18
Wingspan (mm)	50

**01**

Source: Geroldine, Poruma Campus, Tagai State College

9

Doleschallia bisaltide
Australian Leafwing



Egg (mm)	1.0
Larva (mm)	70
Pupa (mm)	31
Wingspan (mm)	85

**6**

Source: Neave, Namadgi Primary School

8

Diaethria clymena
Cramer's eighty-eight



Egg (mm)	0.69
Larva (mm)	25
Pupa (mm)	17
Wingspan (mm)	44

**8**

Source: Mika, Warraber Campus, Tagai State College

7

Chaetocneme denitza
Rare Redeye Flat



Egg (mm)	1.1
Larva (mm)	37
Pupa (mm)	26
Wingspan (mm)	60

**L**

Source: Mary, Namadgi Primary School

6



Aglais urticae

Small tortoiseshell



Egg (mm)	1.0
Larva (mm)	22.2
Pupa (mm)	21
Wingspan (mm)	62



9

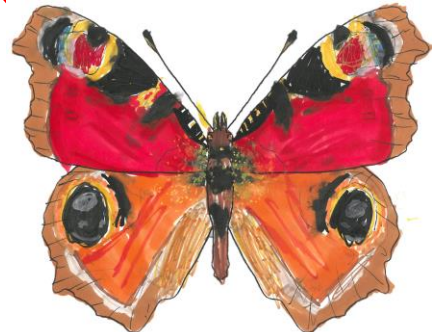
Source: Joejoe, DAFF Bungendore Primary School

5



Aglais io

Peacock butterfly



Egg (mm)	1.0
Larva (mm)	42
Pupa (mm)	28
Wingspan (mm)	100



5

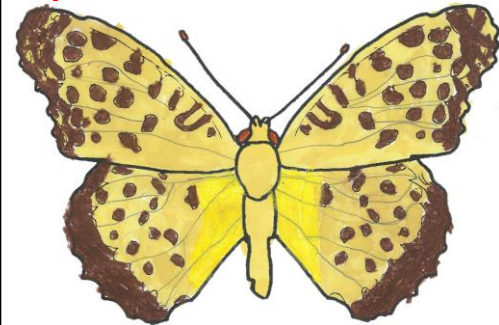
Source: Matilda, DAFF Ainslie Primary School

4



Argynnis hyperbius

Australian fritillary



Egg (mm)	0.7
Larva (mm)	30
Pupa (mm)	26
Wingspan (mm)	70



7

Source: Annalise, Namadgi Primary School

3



Acraea igola

Dusky-veined acraea



Egg (mm)	1.0
Larva (mm)	30
Pupa (mm)	17
Wingspan (mm)	53



3

Source: Annie, DAFF Holy Cross Primary School

2



Heteronympha merope

Common Brown



Egg (mm)	0.8
Larva (mm)	40
Pupa (mm)	20
Wingspan (mm)	70



2

Source: Charlotte, Namadgi Primary School

J

O

K

E

R



R

E

K

O

J

Source: CQW, DAFF staff & children and STEM Schools

J

O

K

E

R

R

E

K

O

J

◆ Black and Brown

A

Endoxyla leucomochla

Witchetty grub/Cossid moth



Egg (mm)	1.4
Larva (mm)	62
Pupa (mm)	40
Wingspan (mm)	140

♦ **W**

Source: Sophie, DAFF Bungendore Primary School

K

Acherontia atropos

Death's-head hawkmoth



Egg (mm)	1.5
Larva (mm)	57
Pupa (mm)	80
Wingspan (mm)	130

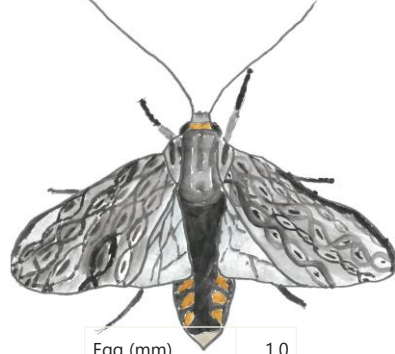
♦ **Y**

Source: Eric, Charles Weston Primary School

Q

Nelpe carolina

Little Carol's wasp moth



Egg (mm)	1.0
Larva (mm)	26
Pupa (mm)	16
Wingspan (mm)	34

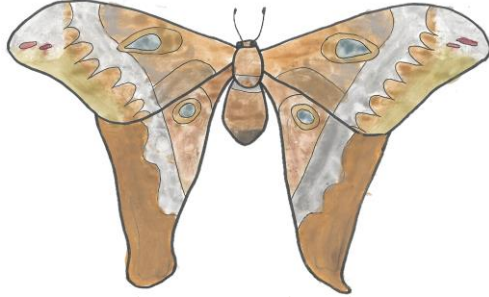
♦ **O**

Source: Charlotte, Farrer Primary School

J

Coscinocera hercules

Hercules moth



Egg (mm)	2.5
Larva (mm)	120
Pupa (mm)	20
Wingspan (mm)	270

♦ **P**

Source: Kaylee, Farrer Primary School

10

Heliconius charithonia

Zebra Longwing



Egg (mm)	0.5
Larva (mm)	40
Pupa (mm)	26
Wingspan (mm)	100

♦ **OI**

Source: Andre, Namadgi Primary School

9

Junonia villida

Meadow Argus butterfly



Egg (mm)	0.75
Larva (mm)	40
Pupa (mm)	15
Wingspan (mm)	52

♦ **6**

Source: Namadgi Primary School

8

Euschemon rafflesia

Regent skipper



Egg (mm)	0.7
Larva (mm)	22
Pupa (mm)	13
Wingspan (mm)	34

♦ **8**

Source: Oby, Garran Primary School

7

Ascalapha odorata

Duppy Bat/Black witch moth



Egg (mm)	1.5
Larva (mm)	60
Pupa (mm)	60
Wingspan (mm)	65

♦ **L**

Source: Dash, Charles Weston Primary School

6

Cressida cressida

Greasy swallowtail



Egg (mm)	0.8
Larva (mm)	35
Pupa (mm)	15
Wingspan (mm)	50



9

Source: Mohsin, Farrer Primary School

5

Papilio demoleus

Chequered swallowtail



Egg (mm)	2.0
Larva (mm)	90
Pupa (mm)	50
Wingspan (mm)	100



51

Source: Olivia, Namadgi Primary School

4

Phyllodes imperialis smithersi

Pink Underwing moth



Egg (mm)	1.0
Larva (mm)	70
Pupa (mm)	60
Wingspan (mm)	160



17

Source: Avy, DAFF Holy Cross Primary School

3

Euploea core

Common crow



Egg (mm)	1.0
Larva (mm)	90
Pupa (mm)	40
Wingspan (mm)	72



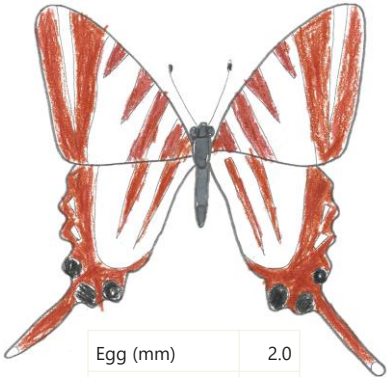
8

Source: Alex, Namadgi Primary School

2

Protographium leosthenes

Four-barred swallowtail



Egg (mm)	2.0
Larva (mm)	40
Pupa (mm)	32
Wingspan (mm)	100



7

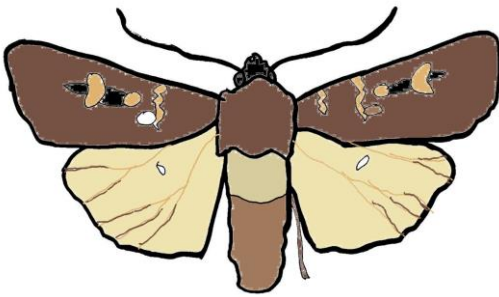
Source: Zac, Namadgi Primary School

♠ White and Mixed

A

Agrotis infusa

Bogong moth



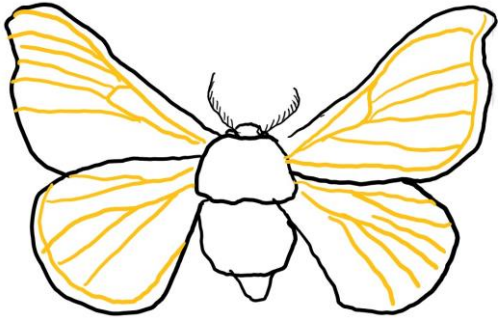
Egg (mm)	0.7
Larva (mm)	50
Pupa (mm)	20
Wingspan (mm)	50

Source: CQW, DAFF staff

**V****K**

Bombyx mori

Silk moth



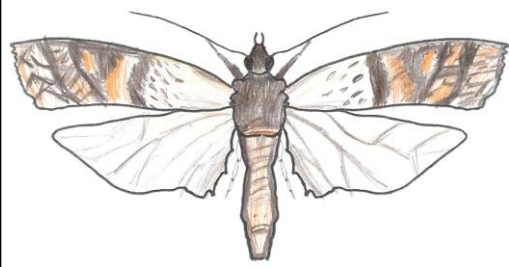
Egg (mm)	1.0
Larva (mm)	40
Pupa (mm)	30
Wingspan (mm)	50

Source: CQW, DAFF staff

**Y****Q**

Plodia interpunctella

Pantry moth



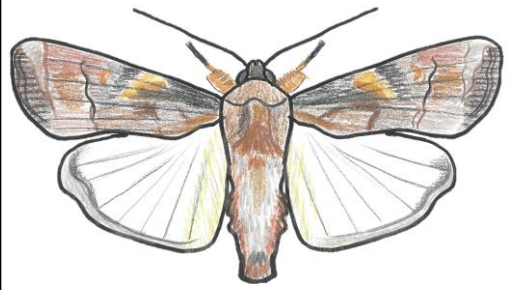
Egg (mm)	0.5
Larva (mm)	12
Pupa (mm)	10
Wingspan (mm)	18

Source: Zac, Namadgi Primary School

**O****J**

Spodoptera frugiperda

Fall army worm



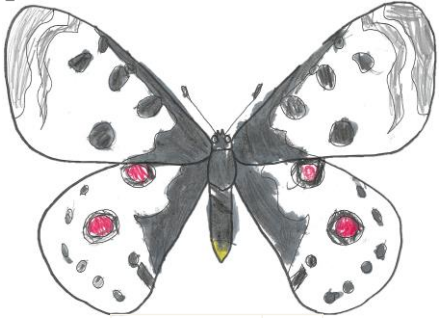
Egg (mm)	0.4
Larva (mm)	34.2
Pupa (mm)	18
Wingspan (mm)	38

Source: Juanita, DAFF Staff

**P****10**

Parnassius apollo

Apollo butterfly



Egg (mm)	2.0
Larva (mm)	60
Pupa (mm)	40
Wingspan (mm)	95

Source: Anabelle, Namadgi Primary School

**01****9**

Cydia pomonella

Codling moth



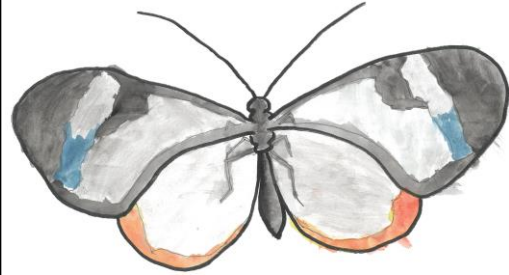
Egg (mm)	1.0
Larva (mm)	15
Pupa (mm)	12
Wingspan (mm)	20

Source: Harfite, Namadgi Primary School

**6****8**

Greta oto

Glasswing butterfly



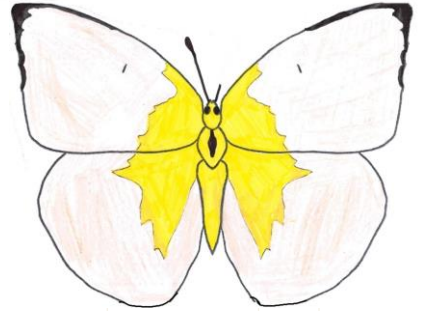
Egg (mm)	0.4
Larva (mm)	45
Pupa (mm)	20
Wingspan (mm)	61

Source: Rigyel, Farrer Primary School

**8****7**

Catopsilia pomona

Lemon migrant butterfly



Egg (mm)	1.0
Larva (mm)	50
Pupa (mm)	34
Wingspan (mm)	60

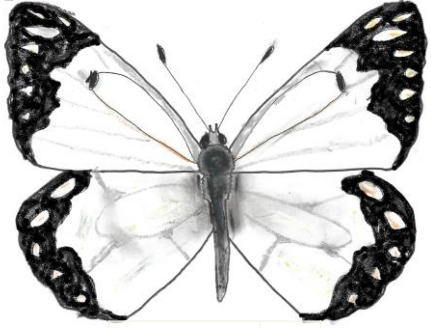
Source: Maisie, Warraber Campus, Tagai State College

**L**

6

Belenois aurota

Caper white



Egg (mm)	0.8
Larva (mm)	32
Pupa (mm)	25
Wingspan (mm)	55



9

Source: Chloe, Namadgi Primary School

5

Pieris rapae

Cabbage white butterfly



Egg (mm)	0.8
Larva (mm)	20
Pupa (mm)	18
Wingspan (mm)	47



5

Source: Arif, Charles Weston Primary School

4

Lymantria dispar

Spongy moth



Egg (mm)	0.5
Larva (mm)	70
Pupa (mm)	40
Wingspan (mm)	40



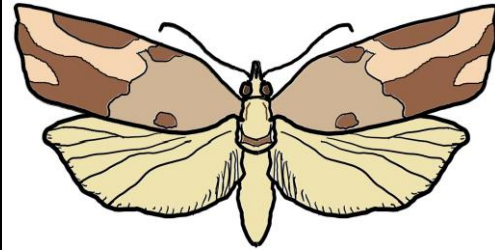
7

Source: CQW, DAFF staff

3

Epiphyas postvittana

Light brown apple moth



Egg (mm)	1.0
Larva (mm)	17
Pupa (mm)	12
Wingspan (mm)	13



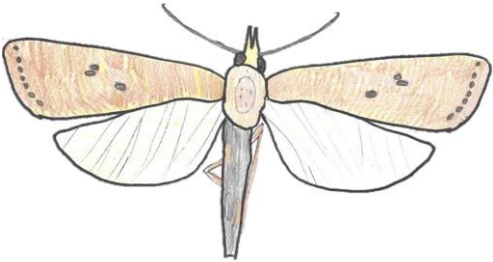
8

Source: CQW, DAFF staff

2

Chilo infuscatellus

Yellow top borer



Egg (mm)	0.8
Larva (mm)	25
Pupa (mm)	17
Wingspan (mm)	26



7

Source: Amelia, Charles Weston Primary School

♣ Blue and Green

A *Ornithoptera priamus poseidon*
 ♣ Priam's Birdwing butterfly



Egg (mm)	2.3
Larva (mm)	64
Pupa (mm)	50
Wingspan (mm)	125



Source: Aria & Evie, Charles Weston Primary School

K *Papilio ulysseus*
 ♣ Ulysses butterfly



Egg (mm)	1.0
Larva (mm)	50
Pupa (mm)	40
Wingspan (mm)	108



Source: Lekizah, Warraber Campus, Tagai State College

Q *Ornithoptera alexandrae*
 ♣ Queen Alexandra's Birdwing



Egg (mm)	3.5
Larva (mm)	60
Pupa (mm)	55
Wingspan (mm)	190

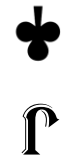


Source: Jacob, Junior Field Naturalist, South Australia

J *Actias luna*
 ♣ Luna moth



Egg (mm)	1.9
Larva (mm)	70
Pupa (mm)	50
Wingspan (mm)	105



Source: Franklin, Charles Weston Primary School

10 *Graphium milon*
 ♣ Milon's Bluebottle

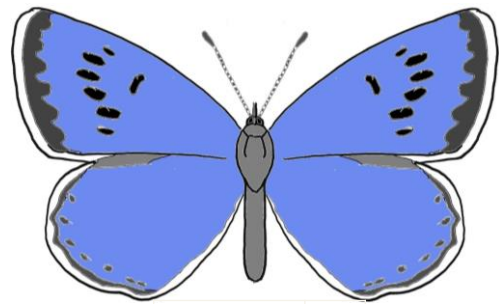


Egg (mm)	1.2
Larva (mm)	44
Pupa (mm)	35
Wingspan (mm)	65



Source: Caitlin, Namadgi Primary School

9 *Phengaris arion*
 ♣ Large Blue/Bristol Blue butterfly

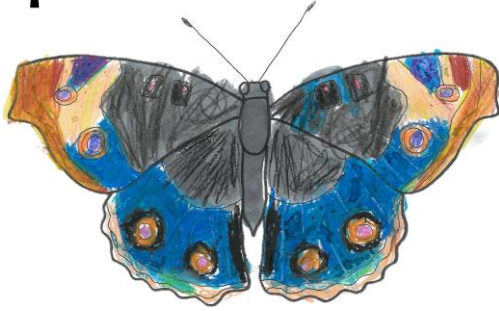


Egg (mm)	0.5
Larva (mm)	15
Pupa (mm)	13
Wingspan (mm)	52

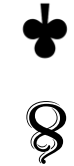


Source: CQW, DAFF staff

8 *Junonia orithya*
 ♣ Blue Pansy butterfly



Egg (mm)	0.65
Larva (mm)	45
Pupa (mm)	19
Wingspan (mm)	50

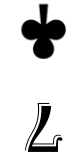


Source: Violet, Namadgi Primary School

7 *Hypolimnastis alimena*
 ♣ Blue-banded Eggfly



Egg (mm)	0.48
Larva (mm)	55
Pupa (mm)	27
Wingspan (mm)	85

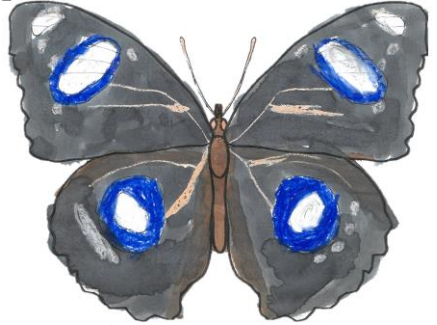


Source: Alice, Farrer Primary School

6

Hypolimnast bolina

Blue moon Eggfly



Egg (mm)	0.48
Larva (mm)	43
Pupa (mm)	22
Wingspan (mm)	89



9

Source: Quinno, Namadgi Primary School

5

Jalmenus evagoras

Imperial Hairstreak



Egg (mm)	0.6
Larva (mm)	20
Pupa (mm)	13
Wingspan (mm)	40



5

Source: Aurora, Namadgi Primary School

4

Hypochrysops polycletus

Royal Jewel



Egg (mm)	0.6
Larva (mm)	18
Pupa (mm)	13
Wingspan (mm)	30



4

Source: Lailah, Charles Weston Primary School

3

Ogyris iphis doddi

Dodd's Azure butterfly



Egg (mm)	0.8
Larva (mm)	16
Pupa (mm)	15
Wingspan (mm)	32



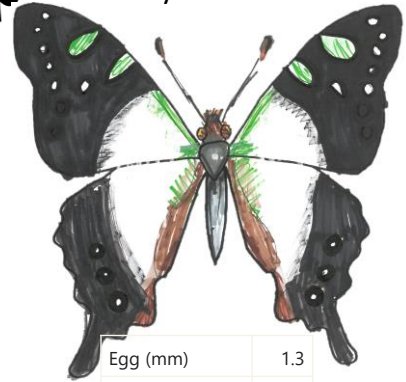
3

Source: Maddy, Namadgi Primary School

2

Graphium macleayanum

Macleay's Swallowtail



Egg (mm)	1.3
Larva (mm)	40
Pupa (mm)	26
Wingspan (mm)	80



2

Source: Matilda, DAFF Ainslie Primary School

J

O

K

E

R



R

E

K

O

J

Source: DAFF Grads Bronte, Hannah & James, DAFF staff & children and STEM schools



**Butterflies
and Moths
of the
World**



**Butterflies
and Moths
of the
World**



**Butterflies
and Moths
of the
World**



**Butterflies
and Moths
of the
World**



**Butterflies
and Moths
of the
World**



**Butterflies
and Moths
of the
World**



**Butterflies
and Moths
of the
World**



**Butterflies
and Moths
of the
World**

Adapted from:
<https://www.template.net/design-templates/box-templates/playing-card-box-template/>
Shallower box

Butterflies and Moths of the World

Butterflies and moths are the adult stages of insects in the Lepidoptera ("scaled wings") order. Lepidoptera have four life stages: egg, larva (or caterpillar), pupa, and adult (butterfly or moth). Butterfly and moth adults have 2 sets of wings, that come in a variety of colours and patterns, produced by the tiny scales covering their wings.

Butterflies and moths are one of the most damaging groups of agricultural pests. This pack contains butterflies and moths that are exotic National Priority Plant Pests, Australian domestic pests, CITES endangered species and species important to First Nations.

The cards contain information on the sizes (mm) of egg, larva, pupa and adult wingspan of butterfly and moth species. Students from Primary Schools throughout Australia including the Torres Strait Islands and children connected to DAFF staff, provided the artwork as part of a STEM Professionals in Schools project.

INSTRUCTIONS - BUTTERFLY AND MOTH GAME 2-6 players.

Shuffle and deal out all the cards, including the Jokers, face down to each player. Players turn over their top card. The dealer starts and selects a category of egg, larva, pupa or wingspan and reads out the number for the category.

Each player reads out their number for the chosen category. (If two or more cards have the same category number, players turn over the next top card and the same category is chosen.)

The winner of the hand is the player with the highest number

OR the player with a Joker card

(the Joker 'trumps' or beats the highest number).

The winner then collects all the cards of the games.

The player to the left of the dealer then turns over their top card and selects a category. Each player has a turn to select a category.

The winner of the game is the player with the most cards.



Butterflies and Moths of the World

Butterflies and Moths of the World