

New Horizon in the Study of Chinese Classical Literature: The Entomologist's Interpretation of Insect Names in the *Book of Poetry (Shijing)**

古籍研究的新視域：從昆蟲學角度詮考 《詩經》中的昆蟲名稱

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This presentation is dedicated to the memory of my teacher,
Professor Lee Tik-Sang(李滌生教授).

Abstract

An insect was used in the “Fuyu Poem” in *Shijing* to satirize the luxurious and extravagant lifestyle of King Zhao and his officials, whose kingdom was on the verge of collapse. The author of this poem did not clearly identify this insect. In Classical Literature, “Fuyu” was also called “Qulue” or “Bailu” and described as an aquatic insect with a short life span. However, after the Three Kingdoms, although still called “Qulue”, “Fuyu” was no longer an aquatic insect but a terrestrial beetle that was born in the morning and died in the evening. It was also called “Jieqiang” or “Qianglang” and even described as a dung beetle. There are no beetles in the insect world that are “born in the morning and die at night”.

There has been dispute over the identity of the insect used in the “Zhongsi Poem” in *Shijing*. However, scholars were in agreement about the interpretations of the set of three adjectives the poet used to describe this insect. Based on their consensus that this

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insect was numerous, gregarious and on the wing, it was concluded that this insect is the migratory locust. This insect “zhongsi” has been used metaphorically as an auspicious symbol for having many children and grandchildren in Chinese culture.

The Jadeite Cabbage is the most popular object in the National Palace Museum’s collection. It was first displayed in the Eternal Harmony Palace, the residence quarter of Emperor Guangxu's Consort Lady Jin, thus has been conjectured that this curio item was part of her dowry for her wedding to Guangxu in 1889. There are two insects on the Jadeite Cabbage. They were identified by an entomology professor as a Chinese bush cricket (vernacular name Guo Guo) and a grasshopper. However, because Guo Guo is in the Suborder Ensifera which includes insects such as the katydid known vernacularly as “zhongsi”, experts at the National Palace Museum mistakenly identified the Guo Guo on the Jadeite Cabbage with the “zhongsi” in *Shijing* and consequently inferred it was intended as an auspicious symbol for having many children and grandchildren. The “zhongsi” in entomology is not the “zhongsi” in *Shijing*. Guo Guo has a pair of short front wings, but no hind wings. Therefore, it cannot be on the wing like the “zhongsi” in *Shijing*. Guo Guo is not “numerous and gregarious” as the “zhongsi” in this poem either. Furthermore, Guo Guo is a singing insect. As Emperor Qianlong stated in the preface to one of his poems, it had been artificially raised and used during the Qing Dynasty to entertain guests at palace banquets since the time of his grandfather Emperor Kangxi. Consequently, this singing insect cannot be used as a fertility symbol. Yet the National Palace Museum still ties the Jadeite Cabbage to *Shijing* to support their "Beautiful Story" that “the whiteness of the cabbage is inferred to signify the chastity of the bride; the locust and the katydid at the leaf tips symbolize fertility.”

Keywords: *Shijing*, fuyu, mayfly, qulue, jieqiang, qiangliang, dung beetle, zhongsi, migratory locust, katydid, Jadeite Cabbage, guo guo, Chinese bush cricket

Introduction

In Chapter 17 of the *Analects* Confucius said, “Young friends, why do you not study the Poetry. By means of the odes one may inspire, one may reveal one’s thoughts, one may gather with others, one may voice complaints. Near at hand, they can guide you to serve your fathers; more distantly, they can guide you to serve a ruler – and you can learn the names of many birds and beasts, trees and grasses.”¹ Indeed, there are names of approximately 24 insects in *Shijing*. They are in the orders of Ephemera, Orthoptera, Hemiptera, Coleoptera, Diptera, Lepidoptera and Hymenoptera.

In the Preface of his book *The She King*, Legge stated, “One great difficulty which a translator of the *Book of Poetry* has to contend with is the names of the plants, birds, quadrupeds, fishes, and insects, with which it abounds”². This is the issue not only in translating *Shijing* into non-Chinese languages, but also for its interpretation by Chinese scholars.

Attempts have been made to understand the names of many birds and beasts, trees and grasses in *Shijing* since the *Subcommentary on Grasses, Woods, Birds, Beasts, Insects and Fishes in Shijing* (毛詩草木鳥獸蟲魚疏) by Lu Ji 陸璣 of the late Three Kingdoms period. Therefore, we have the *Expansion* by Mao Jin (明毛晉毛詩草木鳥獸蟲魚疏廣要), the *Corrections* by Zhao You (清趙佑毛詩草木鳥獸蟲魚疏校正), the *Subcommentary* by Jiao Xun (清焦循毛詩草木鳥獸蟲魚疏疏), the *Corrections* by Ding Yan (清丁晏毛詩草木鳥獸蟲魚疏校正), the *Corrections* by Luo Zhenyu (民國羅振玉毛詩草木鳥獸蟲魚疏校正).

Today, as an entomologist, I would like to share with you my experience in studying insects in the Odes of Cao and in the Odes of Zhou and Nan in *Shijing*.

¹ English translation from “The *Analects of Confucius*” by R. Eno, 2015, Version 2.21, page 96. [https://chinatxt.sitehost.iu.edu/Analects_of_Confucius_\(Eno-2015\).pdf](https://chinatxt.sitehost.iu.edu/Analects_of_Confucius_(Eno-2015).pdf).

² Legge, J. *The Chinese Classics*, Vol. IV, *The She King or The Book of Poetry*, 1871, Reprinted by SMC Publishing Inc. 2002, Taipei, Taiwan.

Our life is that of the mayfly in comparison to the eternity of the universe

寄蜉蝣於天地

Mayflies are in the order Ephemera. (Some authors use “Ephemeroptera” for this order. However, according to the Principle of Priority of the International Code of Zoological Nomenclature, Ephemera should be used). “Ephemera” is from the Greek *ephemeros*, meaning “for a day”. To express the ephemerality of human existence, Su Shi 蘇軾 said in his *Former Red Cliff Rhapsody* 前赤壁賦: “Our life is that of the mayfly in comparison to the eternity of the universe. 寄蜉蝣於天地”. Therefore, in both the East and the West, mayflies are known for their short life span.

What kind of insect is “Fuyu 蜉蝣” in *Shijing*?

The term “Fuyu” first appeared in *the Odes of Cao of Shijing* as an insect used to satirize the luxurious and extravagant lifestyle of King Cao and his officials, even though their kingdom was on the verge of collapse. The author of this poem did not clearly identify this insect. Since the first two stanzas described the wings, we know this “Fuyu” is an adult insect.

“Fuyu” in Classical Literature

The life cycle of mayflies consists of four stages: egg, nymph (naiad), subimago, and imago (adult). Adult mayflies are small to medium-sized terrestrial insects with delicate, many-veined, transparent wings which are held together vertically when at rest (Fig.1). Mayfly



Fig. 1. Adult mayfly (Courtesy of Mr. Gaga Lin)

nymphs occur in all types of fresh water, wherever there is an abundance of oxygen. The most characteristic feature that serves to distinguish mayfly nymphs from all other aquatic insects are their large, paired tracheal gills on the lateral or dorsal surface of most of the abdominal segments (Fig.2). Internal muscles vibrate these gills in a rapid



Fig. 2. Mayfly nymph.

shuttle-like manner either intermittently or for long periods, creating a water current and ensuring an adequate oxygen supply. The adult mayflies have a short lifespan. Some species live only a few hours and others a day to a week or more. Unlike the adult, nymphs of most species have one year life cycle, although a few might live two or possibly three years.

Zheng Xuan 鄭玄 in his *Commentary on the Shijing* stated: “Fuyu is Qulue 渠略. Born in the morning and died at night, but still has wings to adorn itself.”³ *The small calendar of the Xia (Xia xiaozheng 夏小正) in The Rites of Dai the Elder 大戴禮記* not only stated that “Fuyu is Qulue. Born in the morning and died at night”, but also mentioned its abundance in the fifth month.⁴ The two Chinese characters for “Fuyu”

³ 臺北：藝文印書館影印清阮元校刊本《毛詩正義》，頁 268。

⁴ 清·王聘珍輯、王文錦點校：《大戴禮記解詁》，北京：中華書局，1983 年 3 月，頁 37。

in Zheng's "Commentary" use the "Insect" radical while those of *Xia xiaozheng* are written with the "Three Drops of Water" radical. However, they are both called "Qulue". Therefore, both are the same insect. Using the "Three Drops of Water" radical seems to imply that this is an aquatic insect. Additionally, in the *Huainanzi: Quanyan* (An Explanatory Discourse) 《淮南子·詮言訓》, the author stated that "Fuyu lives no more than three days 浮游不過三日". Here the "Three Drops of Water" radical is used for the two Chinese characters for "Fuyu" implying an aquatic insect. According to the *Commentary* of Xu Shen 許慎, "This Fuyu is Qulue, die in 3 days"⁵.

Not all mayflies are short-lived. There are species that can even live to one week or more.⁶ Therefore, this "Fuyu" as described in the classical literature is the "mayfly" of modern entomology, a terrestrial insect with a short life span and an aquatic nymphal stage which has one year life cycle, even up to three years.

The Southern Song dynasty scholar Luo Yuan 羅願 described "Fuyu" in *Eryayi* 爾雅翼 (*Wings to the Erya*) that: "There are insects on the water with very neat wings. They float in groups after the Bailu Period 白露節, drifting away in hundreds of thousands. People of Wanling 宛陵 call them 'Bailu insects'".⁷ So "Fuyu" is also called "Bailu insect" and is aquatic. In *Mōshi hinbutsu zukō* 毛詩品物圖攷 Oka Genpō 岡元鳳 depicted 7 "Fuyu" flying over the water each with 4 wings and 2 long filaments at the posterior end of the abdomen (Fig. 3)⁸. In the text Oka stated "There are insects on the water with very neat wings. They float in groups after the Bailu Period, drifting away in hundreds of thousands. People of Wanling call

⁵ 張雙棣：《淮南子校釋》，北京：北京大學出版社，1997年8月，頁1538。

⁶ Pennak, Robert W., 1953, *Fresh-water invertebrates of the United States*, The Ronald Press Company, New York, page 510.

⁷ 羅願：《爾雅翼》，卷25，葉2左。

⁸ 岡元鳳，《毛詩品物圖攷》，平安杏林軒、浪華五車堂全梓，天明5年，公元1785年，卷六，葉四左。

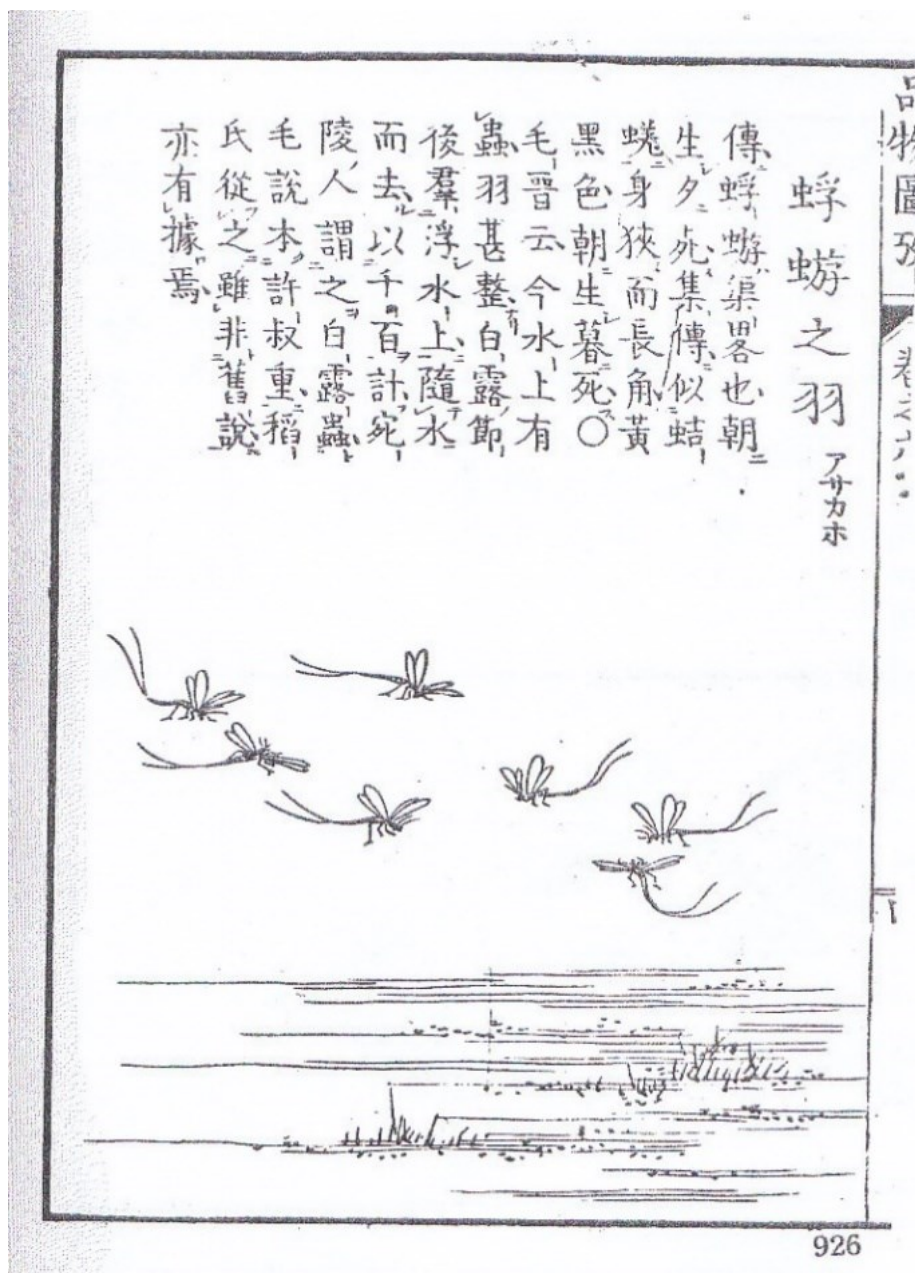


Fig. 3. Mayflies (From Oka Genpo, 1785.)

them ‘Bailu insects’”. He attributed this statement to Mao Jin, but then added that Mao Jin’s statement came from Xu Shen. The *Expansion* by Mao Jin did cite Xu Shen’s commentary on the *Huainanzi* which stated that “This insect born on water,

looks like a silk worm moth.”⁹ Mao Jin did talk about the “Bailu insect” but he simply stated LuoYuan’s definition of “Fuyu” *verbatim*.¹⁰

Therefore, in Classical Literature, “Fuyu” = “Qulue” = “Fuyu” written with three drops of water radical = “Bailu insect” = an aquatic insect with short life span. However, after the Three Kingdoms, “Fuyu”, although still short-lived, was no longer an aquatic insect, but a terrestrial beetle.

The “Fuyu” of Lu Ji 陸璣

According to the *Expansion* by Mao Jin (明毛晉毛詩草木鳥獸蟲魚疏廣要):

Fuyu, colloquial name, commonly known as Qulue, looks like a beetle. It is meaty, about the size of a finger, 3-4 cun in length, with wings under the shell, and can fly. It comes out of the ground in the rainy summer days. People cook it over an open flame and eat it, because it is as delicious as cicadas. Fan Kuang 樊光 said: Scorpion-like insect of the dung, comes out in the rain. Born in the morning and died at night.¹¹

In his *Commentary* on “Fuyu as Qulue” in *Erya*, Guo Pu 郭璞 said: “It looks like a Jieqiang 蜚蜋, body narrow and long, with a horn, yellowish black, abundant in dung, born in the morning and died at night. Pigs like to eat it.”¹² In *Erya* Chapter 15 Explaining Insects, this “Jieqiang” is “Qiangliang 蜚蜋”¹³. According to Luo Yuan 羅願: “Qiangliang” is a dung beetle.¹⁴ He further stated that this “Qiangliang” is a black beetle and can roll dung into a ball (Fig. 4). Therefore, the “Fuyu” of Lu Ji and Guo Pu = Qulue = Jieqiang = Qiangliang = dung beetle.

⁹ 明·毛晉：《毛詩草木鳥獸蟲魚疏廣要》，京都：中文出版社，1980年影印明毛晉汲古閣《津逮祕書》輯本。卷下之下，葉六十四左-六十六右。

¹⁰ 毛晉：《毛詩草木鳥獸蟲魚疏廣要》，卷下之下，葉六十五左。

¹¹ 明·毛晉，《毛詩草木鳥獸蟲魚疏廣要》。卷下之下，葉六十四左。

¹² 據臺北：藝文印書館影印清阮元“校刊本《爾雅注疏》卷九，頁162。

¹³ 《爾雅注疏》卷九，頁162。

¹⁴ 宋·羅願：《爾雅翼》，上海：商務印書館，1922年景印《學津討原本》，卷25，葉7左。



Fig. 4. Dung beetle (Curtesy of Dr. Jing-Fu Tsai)

Lu Ji was by no means a naturalist and neither were the authors of the commentaries and subcommentaries on *Erya* and animals and plants in *Shijing*. Therefore, I would assume that their descriptions of insects were based on second-hand information. Zheng Qiao 鄭樵 of the Song dynasty is an exception. In the *Introduction to Insects, Grasses and Trees* 昆蟲草木略, he stated that he did field surveys to collect information from the rural farmers and elders, mingling among cranes at night and apes in the morning.¹⁵ However, for “Fuyu”, he simply said “It looks like a Qiangliang but smaller and embellished.” He then cited *Erya* and Guo Po.¹⁶ Takezoe Mitsuaki 竹添光鴻 in his 毛詩會箋 *Moshi kaisen* cited Wang Fuzhi that there are two kinds of “Fuyu”: Born in the water, or born in the dung. Takezoe considered “Fuyu” the dung beetle “Qulue” with wings under the “armor jia” (i.e. the elytra of a

¹⁵ 四庫全書，鄭樵：《通志》卷七十五，昆蟲草木略第一，葉五右。

¹⁶ 鄭樵：《通志》卷七十六，葉二十九左。

beetle).¹⁷

Ding Weifen 丁惟汾 of Modern Times had his own observation and stated that “This fuyu looks like a shuichai 水蠶, and is a beetle with wings under the armor (甲 jia), slender body, and 8 legs. The front two legs are long, the 6 hind legs short. There is a head with two feelers. The whole body is gray, the armor cover with fine white spots.They gather on the water surface gliding back and forth, hundreds in number.”¹⁸ “Shuichai” is the nymph of a dragonfly or a damselfly. The dragonfly nymph is short and bulky and the damselfly nymph is long and narrow. They are aquatic. Insects are also known as “hexapods”, because they have 6 legs. This “beetle with 8 legs” does not seem to exist. His description “Gather on the water surface gliding back and forth, hundreds in number.” seems to fit that of whirligig beetles.¹⁹ This aquatic beetle does have one pair of long front legs, but only 4 short hind legs and the body is bulky, not slender. Therefore, this 8-legged aquatic beetle is not a whirligig beetle.

Is the “Fuyu” in *Shijing* a “beetle”?

Although the author of this poem did not clearly identify this insect, we can try to infer the identity of this insect from the descriptions of its wings and body given by the author. This insect’s wings are described as “bright and splendid” in the first stanza and as “variously adorned” in the second stanza. The third stanza states that “The body wears a robe of hemp like snow.” These descriptions, especially the last one, do not fit the “dung beetle” of Lu Ji and Guo Po.

Like all beetles, the front pair of wings in the dung beetles are hardened into wing-cases called “elytra”. The forewings are not used for flight, but to protect the

¹⁷ 竹添光鴻，《毛詩會箋》，〈蜉蝣詁訓傳第十四〉，葉一左。台北：國華出版社，民國 64 年。

¹⁸ 丁惟汾：《詩毛氏傳解故》，臺北：中華叢書編審委員會，1966 年，頁 165。丁惟汾，《爾雅釋名》（臺北：中華叢書編審委員會，1966 年），頁 76。

¹⁹ Pennak, Robert W., 1953, p. 604。

hindwings. They must be raised to allow the hindwings to move for flight. Most dung beetles are strong fliers and can travel several miles in search of the perfect dung. The body is mostly a somewhat metallic black color.

The description in the third stanza that “The body wears a robe of hemp like snow” easily negates the possibility that “Fuyu” is a dung beetle which is black and somewhat metallic looking as shown in Fig.4. As for the wings, only when this insect is in flight, can they both be seen by the author of this “Fuyu” poem. However, the most serious problem with this “dung beetle” of Lu Ji and Guo Po is that there are no beetles in the insect world that are “born in the morning and die at night”.

Since the first two stanzas described the wings, we know this “Fuyu” is an adult insect. However, the most common interpretation of the phrase “fuyu jueyue 蜉蝣掘閱” in the last stanza of this poem implies that this insect “Fuyu” is not the “mayfly” as we know it (See the next section).

The Impact

This definition of “Fuyu as a beetle” has since been used in the literature, even nowadays. Li Shizhen 李時珍 in his *Compendium of Materia Medica* 本草綱目 combined the statements of Lu Ji and Guo Po in his description of “Fuyu”.²⁰ “Fuyu” was depicted as a beetle in Volume 3 of 清徐鼎 Xu Ding’s *Illustrated Manual of Things in Mao’s Poetry, with Explanatory Notes*. 毛詩名物圖說卷三 (Fig.5).²¹ The late Qing dynasty naturalist Fang Xu 方旭(1890) continued to cite Erya and Lu Ji for “Fuyu” in his glossary of insect names *Chonghui* 蟲薈.²² Even some modern entomologists

²⁰ 李時珍：《本草綱目》（臺北：臺灣商務印書館，1968年），頁13。

²¹ 徐雪樵：《毛詩名物圖》，卷三，葉五右，文化戊辰（筆者注：公元1808）唐本翻刻，宮商閣、寶翰堂發兌。徐雪樵，〈毛詩名物圖〉，卷三，葉五右，文化戊辰，唐本翻刻，宮商閣、寶翰堂發兌。

²² 方旭：《蟲薈》，臺北：新文豐出版社，1989影印《聚學軒叢書》本，頁296。

still consider “Fuyu” a terrestrial scarab beetle.²³

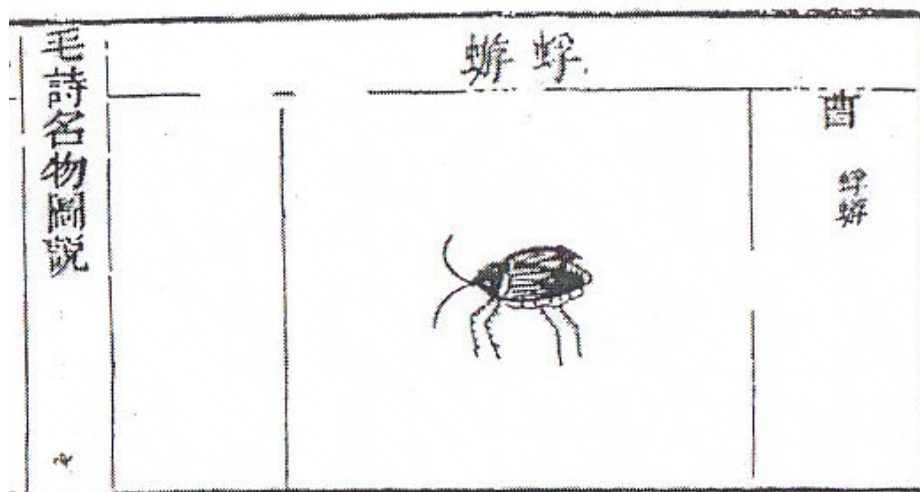


Fig.5. Mayfly (From Xu Ding, 1771.)

This definition of “Fuyu” as a beetle has been followed in the translation of the *Shijing* phrase “fu jueyue 蜉蝣掘閱” in both English and Chinese publications. On page 221 of Legge 1871 *The She King*, there is the line “The ephemera bursts from its hole”. And on page 331 of 賈福相 Fu-Shiang Chia’s book, the translation reads “Mayfly crawling from your hole”.²⁴ On page 194 of *Shijing, Modern Commentary* 詩經今注 by Gao Heng 高亨, the translation is “jue 掘 to dig; yue 閱 hole, the fuyu dug through the hole 蜉蝣穿穴”.²⁵ However, on page 193, he did clearly describe “Fuyu” a “mayfly” as in entomology. In *Translated and Annotated Shijing (The Illustrated Version)* 詩經譯注(圖文本) by Cheng Junying 程俊英, the author also used the interpretation “jue 掘 to dig; yue 閱 hole” and translated “fuyu jueyue 蜉蝣掘閱” as “Fuyu dug through the hole and came to this world 蜉蝣穿洞來人間”.²⁶ Interestingly,

²³ 朱弘復、高金聲，1950，〈本草綱目昆蟲名稱注〉，《中國昆蟲學報》卷一，頁 234-26。

²⁴ 賈福相，2008，《詩經·國風：英文白話新譯》，台北：書林出版有限公司。

²⁵ 高亨，1980，《詩經今注》，上海古籍出版社。

²⁶ 程俊英，1985，《詩經譯注(圖文本)》，上海古籍出版社，頁 208。

this author used the illustration of flying mayflies from Oka Genpo (Fig.3).²⁷

Although nymphs of some mayfly species are burrowers²⁸ (Fig.6), adults are so fragile that they cannot “dig” at all. And the “Fuyu” in this poem is an adult insect.

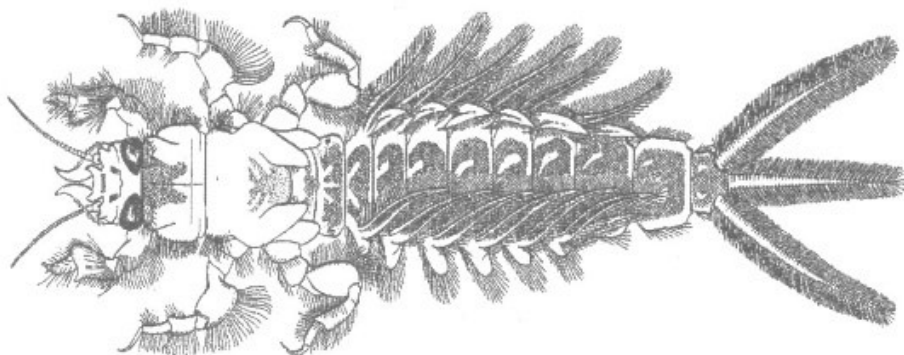


Fig.6. *Pentagenia* nymph (From J. G. Needham, 1920, Bull. US Bureau of Fishery, 36:265-292.)

The Jadeite Cabbage

The Jadeite Cabbage is a unique piece of art and a significant antiquity, but it is not recognized as a national treasure under the Cultural Heritage Preservation Act. Yet it has been chosen by the public as the most important item in the National Palace Museum's entire collection.

The Beautiful Story

The Jadeite Cabbage (Fig. 7) was first displayed in the Eternal Harmony Palace, the residence quarter of Emperor Guangxu's Consort Lady Jin 瑾妃. It has been conjectured that this curio item was part of her dowry for her wedding to Guangxu in 1889. This sculpture has two insects and the National Palace Museum (NPM) invited the professor of entomology, Dr. Jeng-Tze Yang 楊正澤, to identify them. They were identified as a locust and a Chinese bush cricket.²⁹ Dr. Yang pointed out that these

²⁷ See Footnote #8. °

²⁸ Pennak, Robert W., 1953, p.513. °

²⁹ 楊正澤, 2004, 〈翠玉白菜外一章-螽蟴與蝗蟲〉, 《故宮文物月刊》, 251期, 頁64-66. °

two insects belong to two suborders in the Order Orthoptera 直翅目. The Chinese bush cricket is in the Suborder Ensifera (or Suborder “Zhong” 螞蟴亞目 in Chinese). He further stated that the Chinese bush cricket is called “Guo Guo 蝈蝈” in Northern China and as a singing insect, has been sold in a bamboo cage for people to enjoy its beautiful singing and chirping. However, because it belongs to the Suborder Ensifera (or Suborder “ Zhong ”) in which insects are collectively referred to as “zhongsi 螞蟴”, this “Guo Guo” has been wrongly identified with the insect “zhongsi” in *Shijing* and consequently inferred to metaphorically as an auspicious symbol for having many children and grandchildren. So we now have a beautiful story about this “dowry” of Lady Jin: The sculpture is an allegory of female virtue with the white stalk and the green leaves symbolizing purity (qing bai 青白), the locust and katydid representing fertility.



Fig. 7. Jadeite Cabbage

(From <https://theme.npm.edu.tw/opendata/index.aspx>).

Treasured Masterpieces from the National Palace Museum were on exhibit at Tokyo National Museum from June 24, 2014 to September 15, 2014. However, the Jadeite Cabbage was only on exhibit from June 24 to July 7, 2014. This masterpiece was so popular that people even waited 2 hours in line to view it.

The “zhongsi” of *Shijing* is not the “zhongsi” of modern entomology

There has been dispute over the identity of the insect used in the “Zhongsi Poem 螽斯篇” in *Shijing*. Despite such diverse opinions, these authors were in agreement about the interpretations of the set of three adjectives the poet used to describe this insect. Based on their consensus that this “Zhongsi” was numerous, gregarious and on the wing, Hung(2008) concluded that this insect belongs to the suborder Caelifera 蝗亞目 (grasshoppers and locusts) and not in the suborder Ensifera 螞蟴亞目 (crickets and katydids). This insect (zhongsi) is very likely a migratory locust that usually causes devastating damage to crops. (Fig. 8) Insects in the suborder Ensifera are generally fewer in number, non-gregarious and less destructive.³⁰ This insect has been used metaphorically as an auspicious symbol for having many children and grandchildren in Chinese culture. Thus we have the felicitation “Zhong si yan qing 螽斯衍慶” (May your offspring be as numerous as a zhongsi’s.)



Fig. 8. Migratory locust (Courtesy of Dr. Jean-François Duraton).

³⁰ 洪章夫，2008，〈從昆蟲學角度釐清《詩經》中「螽斯、斯螽」的物種〉，《國文學報》，43期，頁1-41。

The locust plague in China can be dated back to early Chin. However, this pest was called both “Huang and Zhong” in ancient literature. For example, in *Shuowen Jiezi* 說文解字 Vol. 13 (A): “Huang is Zhong 蝗，蟲也。” and Vol. 13 (B): “Zhong is Huang 蟲，蝗也。”³¹ According to *Chunqiu Zuozhuan* 春秋左傳, “In the third year of Wengong, zhong fell from the sky like rain in Sung and died. 文公三年秋：「雨蟲于宋，隊而死也。」”³² The *Records of the Grand Historian (Shiji)* also stated in the Basic Annals of First Emperor of Qin 史記·秦始皇本紀: “One early morning between 3 and 5 in the 10th month, huangchong came from the east, covered the sky. The pestilence came. 十月庚寅，蝗蟲從東方來，蔽天。天下疫。”³³ Therefore, both “Zhong” and “huangchong” were used for the migratory locust in ancient literature.

However, in Chinese entomological literature, “suborder Caelifera” is “suborder Huang 蝗亞目” and insects in this suborder are collectively called “huangchong (such as grasshoppers and locusts) 蝗蟲” (Fig. 9). Whereas “suborder Ensifera” is “suborder



Fig. 9. The “huangchong” (Courtesy of Dr. Jean-François Duraton).
Zhong 蟲亞目” and insects in this suborder are collectively called “zhongsi (such as

³¹ 漢·許慎撰、宋·徐鉉等校：《說文解字》，上海：上海古籍出版社，2007年，頁671, 677。

³² 清·阮元校刊：《春秋左傳正義》，臺北：藝文印書館，1955年影印《十三經注疏》本，卷7，頁305。

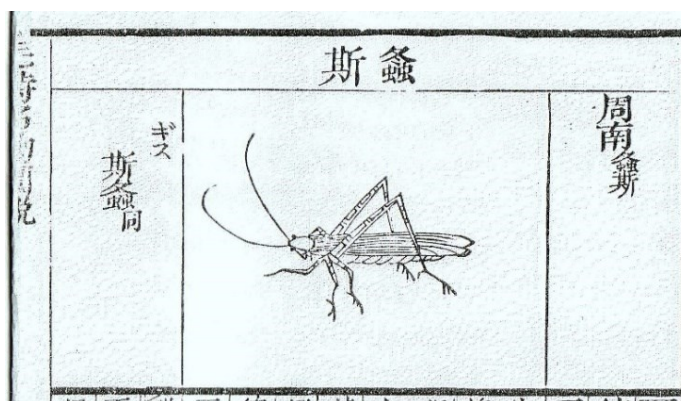
³³ 漢·司馬遷：《史記》，北京：中華書局，1965年，頁224。

katydis) 螽斯” (Fig. 10). How these two terms of the same insect were selected to designate two different groups of insects is not known. I am still investigating this issue.



Fig. 10. The “zhongsi” (Courtesy of Dr. Jeng-Tze Yang).

While grasshoppers and locusts have relatively short, thick antennae, katydid's antennae are often equal to or longer than their own body. However, both Xu Ding and Oka Genpo depicted their “zhongsi” with very long antennae (Figs.11³⁴ and 12³⁵). Oka further considered “zhongsi” in *Shijing* the insect “kiligilisu” in Japanese. According to Matsumura (1931), “kiligilisu” is a katydid.³⁶ (Fig. 13)



Figs.11. Zhongsi (From Xu Ding,1771)

³⁴ See Footnote #21, 葉一右。

³⁵ See Footnote #8, 葉一右。

³⁶ Matsumura, S. 1931. 6000 Illustrated Insects of Japan Empire, Tokyo: Tōkōshoin 刀江書院, p. 1352。

The use of the term “zhongsi” for insect in the suborder Ensifera apparently led Gao Mingqian et al. (2005) to interpret the “zhongsi” in *Shijing* as the “zhongsi” in entomology and identified this *Shijing* insect as the bush cricket *Holochlora nawae*³⁷ (Fig. 14). However, the bush cricket is not gregarious nor can fly as the “zhongsi” in *Shijing*.



Fig. 14. Bush cricket (From Wikipedia, photo by LiCheng Shih).

As Dr. Yang pointed out in his article, the Chinese bush cricket has a pair of short front wings, but no hind wings (Figs. 15 & 16). Therefore, it cannot be on the wing like the “zhongsi” in *Shijing*. And as in all insects in the suborder Ensifera (or suborder Zhong in Chinese), the Chinese bush cricket is not “numerous and gregarious” as the “zhongsi” in this poem either.



Figs. 15. Chinese bush cricket (Courtesy of Dr. L. Z. Li)

³⁷ 高明乾，佟玉華，劉坤：《詩經動物釋詁》（北京：中華書局，2005年），頁16-18。



Figs. 16. Chinese bush cricket on Jadeite Cabbage (Close-up of Fig. 7.)

The “Luo Wei 絡緯” of Emperor Qianlong

Emperor Qianlong wrote two poems about the insect “Luo Wei”. In the Preface to his first “Luo Wei” poem, he stated that since his grandfather’s time, a special official was in charge of raising “Luo Wei” in the greenhouse, just like growing flowers to bloom in the winter. This insect was then kept in a silver covered cage and presented at banquets to sing.³⁸ After attending such a banquet and listening to the song of this insect, Jiang Pu 蔣溥 drew a painting of “Luo Wei” (Fig. 17) with the “Luo Wei” poem and preface of Emperor Qianlong, his poem and poems of other attendees who were equally inspired by this singing insect “Luo Wei”. There are seven insects in this painting: One “Luo Wei” and two crickets on the ground, and three “Luo Wei” on the tree.

³⁸ 蔣溥等編：《御製詩二集》，景文淵閣四庫全書，卷一，葉十七右。



Figs. 17. Painting of “Luo Wei” by Jiang Pu (From <https://theme.npm.edu.tw/opendata/index.aspx>)

The name “Luo Wei” used to describe the insect in Emperor Qianlong’s two poems and depicted in the painting by Jiang Pu is a misnomer. As pointed out by Hung (2013)³⁹, “Luo Wei” is “Shaji 莎雞” in *Shijing* and is a *Mecopoda* katydid (or Fangzhi niang 紡織娘) with green and brown forms. “Luo Wei” and “Guo Guo” are two different insects as clearly pointed out by 方旭⁴⁰. However, the name “Luo Wei” has been widely misused for the Chinese bush cricket “Guo Guo” in both paintings and popular articles.⁴¹ Although both insects are in the suborder Zhong, “Luo Wei” has two pairs of wings that are longer than the abdomen (Fig. 18), but “Guo

³⁹ 洪章夫，2013，〈從昆蟲的形態及生態詮考《詩經》中「莎雞」之物種〉，《興大人文學報》，51 期，頁 1-38。

⁴⁰ 方旭，《蟲薈》，頁 293。

⁴¹ 洪章夫，2012，〈古畫中的「絡緯」〉，《故宮文物月刊》，346 期，頁 74-81。

Guo” has only the short front wings which do not cover the abdomen (Fig. 15). The four “Luo Wei” in Jiang Pu’s painting all have very short wings. Therefore, they are “Guo Guo”, not “Luo Wei”. Even though Jiang Tingci 蔣廷賜 painted two “Guo Guo” with very short front wings, Zhang Zhao 張照 used “Luo Wei” in the matching calligraphy, hence this art work is entitled “Luo Wei on Bian Dou (hyacinth bean) Flower” (Fig. 19).



Fig. 18. The green form of “Fangzi Niang, aka Luo Wei” (Courtesy of Dr. Jeng-Tze Yang).



Fig. 19. Painting of “Luo Wei” by Jiang Tingci with matching calligraphy by Zhang Zhao (From <https://theme.npm.edu.tw/opendata/index.aspx>)

The Chinese bush cricket (vernacular name “Guo Guo”) on the Jadeite Cabbage as identified by Dr. Yang (Figs. 15 &16) looks much like the 6 insects with short wings depicted in the paintings of Jiang Pu and Jiang Tingci. Therefore, they can all be identified as the same insects. As Emperor Qianlong stated in the preface to one of his “Luo Wei” poems, the Chinese bush cricket is a singing insect and was artificially bred during the Qing Dynasty to entertain guests at palace banquets since the time of his grandfather Emperor Kangxi. Consequently, this singing insect cannot be used as a fertility symbol.

The Response from the National Palace Museum

Since the media was in a “frenzy” reporting the “beautiful story” of this artistic sculpture and dubbed the Jadeite Cabbage “the most important item in the museum's entire collection”, I felt compelled to clarify the “significance of the two insects” on it. Therefore, I published an article entitled “Studies of insects on the Jadeite Cabbage 〈翠玉白菜〉上的昆蟲研究” in Awakening News Networks 台灣醒報 on July 15, 2014. The article is also available online <https://anntw.com/articles/20140716-hkik>. I also revised the statement in the “Description” section in the Wikipedia regarding these two insects as follows:

However, further studies have proven that this interpretation is incorrect with regard to the katydid. There is a poem about an insect "zhongsi" in the Book of Poetry. This insect has been used metaphorically as an auspicious symbol for having many children and grandchildren in Chinese culture. Based on the interpretations of this poem and entomological analyses, this "zhongsi" is very likely a migratory locust. The locust on the Jadeite Cabbage is too small to be positively identified as a migratory locust. However, this "katydid" is definitely a Chinese bush cricket (*Gampsocleis gratiosa*) which is not the "zhongsi" of the Book of Poetry. In fact, the Chinese bush cricket is a singing insect artificially raised and used during the Qing Dynasty to entertain guests at the palace banquet. Consequently, this insect cannot be used as a fertility symbol. https://en.wikipedia.org/wiki/Jadeite_Cabbage

Yet the “official interpretation” of the National Palace Museum for these two

insects has not been changed. Here is the description of the Jadeite Cabbage in the National Palace Museum website:

https://theme.npm.edu.tw/exh106/npm_anime/cabbage/en/index.html

Jadeite Cabbage

- Qing dynasty(1644-1911)
- Length: 5.07, Width: 9.1, Height: 18.7cm

Carving jadeite into bokchoy, Chinese cabbage, began to become popular in the middle and late Qing dynasty. The thematic association of bokchoy and insects actually can be traced back to the professional insect-and-plant paintings of the Yuan to early Ming dynasty (13th-15th c.) when they were popular among the people for its auspiciousness.----- So, by means of an ingenuous hand, defects may be perfected.

The Jadeite Cabbage used to be a curio item displayed in the Eternal Harmony Palace, the residence quarter of Emperor Guangxu's Lady Jin. For this reason, the piece is thought to have belonged to her. Hence, the whiteness of the cabbage is inferred to signify the chastity of the bride; the locust and the katydid at the leaf tips symbolize fertility.

The Chinese version still calls that Chinese bush cricket “zhongsi” and these two insects “symbolize fertility”.

https://theme.npm.edu.tw/exh106/npm_anime/cabbage/ch/index.html

Suppose my interpretation of the insect in the Shijing “Zhongsi” poem as a migratory locust is wrong. This “Guo Guo” on the Jadeite Cabbage is still not *Holochlora nawae* proposed for this “zhongsi” by Gao Mingqian 高明乾 et al. (2005). Although *H. nawae* cannot fly as far as the migratory locust, it does have two pairs of wings and can still fly. But as Dr. Yang pointed out, the Chinese bush cricket (Guo Guo) has a pair of short front wings, but no hind wings. Therefore, it cannot fly at all.

After 6 years there is finally one response to my 2014 article in Awakening News Networks. Professor Wang published an excellent article on the Jadeite Cabbage in the

444 issue of The National Palace Museum Monthly of Chinese Art in early 2020⁴².

Professor Wang presented an excellent account of “Cabbage in Chinese Art” and her perspectives on this subject. However, as the saying goes, “A difference in profession makes one feel worlds apart” - there are some inevitable entomological blunders in her excellent article. She also has an alternative interpretation of insects on the Jadeite Cabbage, suggesting “Just consider the two insects Guo Guo and Qu Qu 蝓蝓 munching vegetable leaves and their chirping song boosting the joy of wine-drinking, then the Jadeite Cabbage would clearly reflect the food and entertainment culture of the Qing Court.” However, “Qu Qu” is another name for cricket. But there isn't a cricket on the Jadeite Cabbage. Furthermore, the other insect on it is a grasshopper which is not a singing insect. Despite these entomological blunders, in my humble layman's opinion, her interpretation of the two insects on the Jadeite Cabbage can be a way to get around the “*Shijing*” issue. Evidently, NPM does not agree with her, despite publishing her article in their journal. NPM still ties the Jadeite Cabbage to *Shijing* to support their “Beautiful Story.”

Epilogue

Shijing has 3 writing styles: Fu (narrative), Bi (metaphorical) and Xing (allusive). Both “Zhongsi” and “Fuyu” poems are in the metaphorical style.⁴³ To correctly interpret the metaphorical meaning of these poems, the correct identity of the insect used is crucial. Traditionally, *Erya* “Chapter 15 Explaining Insects” would be the place to find the definition of an insect. However, each entry only provides a very brief description, sometimes even simply an alternative name, such as “Fuyu is Qulue” which is the vernacular name used in the region between Liang and Song. Therefore, Guo Pu wrote *Erya Commentary* 爾雅注 for each entry with description and Xing Bing 邢昺 of Song dynasty wrote *Erya Subcommentary* 爾雅疏 which quoted many descriptions

⁴² 王柏樺，2020，寶石盆景〈翠玉白菜〉的聯想與賞析，《故宮文物月刊》，444期，頁46-58。

⁴³ 宋·朱熹：《詩經集註》，臺南：大孚書局，2006年，頁4, 68。

from both ordinary literature and medicinal bencao 本草. However, for the insect “Fuyu”, Guo Pu followed Lu Ji’s definition in his commentary and Xing Bing quoted both Lu Ji and Guo Pu in his subcommentary. Defining an insect as “a beetle which is born in the morning and dies at night” is an obvious entomological blunder.

The case of “Zhongsi” on the Jadeite Cabbage is less complicated. It is simply an example of “mistaken identity” and early entomologists are responsible for this problem. For some reason, they chose to call “suborder Caelifera” “suborder Huang 蝗亞目” and insects in this suborder are collectively called “huangchong 蝗蟲”, and “suborder Ensifera” “suborder Zhong 螽亞目” and insects in this suborder are collectively called “zhongsi 螽斯”. Most entomologists do not know the “zhongsi” in entomology is not the “zhongsi” in *Shijing*, let alone scholars at the National Palace Museum.

Only 6 to 7 hundred years after Confucius compiled *Shijing*, Lu Ji already had difficulties correctly identifying those insects, let alone scholars after him. Thus Dong Zhongshu 董仲舒 said in *The Luxuriant Dew of the Spring and Autumn Annals* (春秋繁露) “*Shijing* defies fixed interpretation 《詩》無達詁”, pointing out the difficulties in the interpretation of *Shijing*. As an entomologist, I have the advantage of having specialized knowledge of insects. It helps me to identify the insects mentioned in *Shijing* as accurately as possible. I hope my efforts in providing morphological and ecological information of the insects I identified can help *Shijing* scholars in their interpretation of these poems and the general public in using these insects for the cultural expressions.

Addendum

After submitting the manuscript to the editor in late October, I had the pleasure of corresponding with Dr. Hsiao-yun Wu of NPM in November. She kindly emailed me three articles which casts new light on the Jadeite Cabbage/*Shijing* Connection advocated by NPM.

In his 1985 article⁴⁴, Professor Na Zhiliang 那志良 of NPM speculated on the

⁴⁴ 那志良，1985，〈故宮藏玉介紹（五）—翡翠白菜、瑪瑙水盂、墨晶筆筒〉，《故宮文

artist's motivation for choosing bok choy cabbage and Guo Guo in creating the Jadeite Cabbage. This jadeite is half green and half white. Therefore, it is the right color to carve it into a bok choy cabbage which has green leaves and white petioles. However, it would be rather monotonous to just have a cabbage. Adding an insect to it would be much better. But which insect? Professor Na further speculated that this insect candidate must meet two criteria:

1. This insect must be green to be carved on the green portion of the jadeite.
2. Bok choy is the seasonal vegetable in the autumn in the Peking area.

This insect must be found during this season.

According to Professor Na, only Fangzhi Niang 紡織娘 best meets these two criteria. Fangzhi Niang is called “Gua Gua 呱呱” in Peking.⁴⁵ It also frequently comes to the garden to eat bok choy. Therefore, this insect was selected and carved on to the bok choy. Professor Na further pointed out that “Gua Gua” is a very popular singing insect sold on the street in Peking. Having this beloved singing insect on jadeite bok choy is the best combination. Since it was found in the Eternal Harmony Palace, Professor Na conjectured that this curio item was part of the dowry of a queen or a consort.

This is the background for the creation of Jadeite Cabbage. It has nothing to do with the fertility.

In a one-page note on the Jadeite Cabbage⁴⁶, Professor Deng stated “Zhongsi is in the migratory locust family. It is commonly known as Fangzhi Niang or Gua Gua. This insect is good at loud tweeting and is very fertile. The “zhongsi” poem in *Odes Zhou and the South* in *Shijing* is a blessing used to wish people many offspring. Bok choy symbolizes “pure and unsullied reputation”. Therefore, carving “zhongsi” on bok

物月刊》，29期，頁62-65。

⁴⁵ Entomologically “Fangzhi Niang” and “Gua Gua” are different insects. “Fangzhi Niang” also known as Luo Wei 絡緯 (weaver) is *Mecopoda elongate*. The two most common species of “Gua Gua” (also known as Guo Guo 蝈蝈) sold in Peking as singing insects are *Gampsocleis inflata* and *Gampsocleis gratiosa*. Fangzhi Niang has both front and hind wings, but Gua Gua has no hind wings.

⁴⁶ 鄧淑蘋，1991，〈清翠玉白菜〉，《故宮文物月刊》，100期，頁31。

choy symbolizes having many children and grandchildren and being pure and unsullied.”

There are some entomological blunders in Professor Deng’s statement. As noted in Footnote #42, Fangzhi Niang and Gua Gua are two totally different insects. Yes, the “zhongsi” in *Shijing* is in the migratory locust family, if this is the insect she referred to. But then neither Fangzhi Niang nor Gua Gua is a migratory locust. If she was using “zhongsi” as the insect of modern entomology, then this insect is still very different from Fangzhi Niang and Gua Gua.

In another article published in 2010, Professor Deng recalled that one day Director Ch’in Hsiao-yi gave a moral sermon at the Monthly Mobilization Assembly.⁴⁷ His speech was similar to the statement she made in that short note. He then concluded “This Jadeite Cabbage carries the message of the parents’ wish that their married daughter will hold on to her purity and beget many progeny for the husband’s family.”

The concluding remark of Director Ch’in agrees with Professor Na’s conjecture that this curio is a dowry. As Professor Deng stated, she trusted Professor Na’s intuition that Jadeite Cabbage is a dowry and should be categorized in this manner because Professor Na was an ethnic Manchurian growing up in Peking and knew Manchurian culture well. Dr. Ch’in was the NPM Director from January 1983 to May 2000. Professor Na published this article in 1985 which was during Dr. Ch’in’s tenure as Director of NPM. Professor Deng published her short note in 1991 and Professor Na passed away in 1998. Both Professor Deng and Director Ch’in obviously did not agree with Professor Na’s reconstruction of the scenario for the creation of Jadeite Cabbage which has nothing to do with fertility. This Jadeite Cabbage/*Shijing* connection apparently became the “Official Interpretation”. Dr. Ch’in was no longer the NPM Director when Professor Yang was invited to NPM to identify these two insects on January 23, 2002. Unfortunately, Professor Yang’s contribution to the identity of these two insects was mistakenly used to support the Jadeite Cabbage/*Shijing* connection because he pointed out that Guo Guo is one of the insects in the “Zhongsi” suborder. I published my “zhongsi” paper in 2008. Therefore, Professor Yang was not aware

⁴⁷ 鄧淑蘋，2010，〈永恆的巧思〉，《故宮文物月刊》，322期，頁59-61。

that the “zhongsi” in *Shijing* is not the “zhongsi” of modern entomology. Otherwise, he would have pointed out this “name confusion” in his 2004 article reporting his identification of the two insects on the Jadeite Cabbage.

