



# 台灣賞蛙趣

The Fun of Frog-Watching in Taiwan



台灣的蛙類單從外型與骨骼就能區分成五大科，從討喜的樹蛙科到醜怪的蟾蜍科，都是這個家族的成員，而光是單一種的青蛙，就能順隨環境產生千變萬化的顏色與花紋。牠們的求偶樂章更是無奇不有，除了逗趣愉悅的呱呱之鳴，還有鳴聲如鳥、叫聲如狗、如蟲鳴、像火雞，甚至還有豎琴般悅耳的蛙鳴等。當夜幕低垂，走入蛙類世界，將會有許多驚奇。

Frogs in Taiwan can be sorted into 5 families according to their physical appearance and skeleton structure. Both the cute tree frog family and the ugly toad family are members of the frog clan. One single frog species can have a kaleidoscope of colors and skin patterns. Their mating calls are even more variable, including pleasant sounds like croaking, birds and insects chirping, dogs barking, turkeys quacking or musical harping. A night walk into the world of frogs will bring you wonderful surprises.

蛙類，全世界約有4千多種，主要分布於熱帶及亞熱帶地區；其中，台灣約占32種，有8種為台灣特有種，特有種除了盤古蟾蜍之外，其餘7種全屬外型特別討喜的樹蛙科，種類雖然不多，但相較之下，數量卻不少。如果要說台灣是蛙的樂土也不為過，因為蛙類喜歡在潮濕多雨的環境下活動，而台灣正好雨量充沛，蛙類的繁殖期因此比其他地區來得長，可說是賞蛙的好地方。

花蓮教育大學生態與環境教育研究所所長楊懿如分析，台灣的樹蛙為冰河時期由中國大陸南方遷徙而來，冰河消退之後，兩地被海峽隔絕，回不去的樹蛙因此演化為島嶼特有的蛙種。當然，由於環境的變遷，有些蛙種數量所剩不多，如最近生態界忙於搶救的諸羅樹蛙，僅在雲林、嘉義、台南一帶發現，且棲地無可避免地已遭到破壞；也有瀕臨絕種但復育有成，數量正在增加中的美麗蛙種，如橙腹樹蛙等。

There are over 4000 species of frogs in the world, mostly in the tropics and the subtropical areas. Of the 32 species found in Taiwan, 8 are endemic species that include, with the exception of *Bufo bankorensis*, 7 of the cute-looking family Rhacophoridae (tree frog). Though not many in number of species, the total population is great and entitles Taiwan the “frogs’ paradise”. Taiwan is privileged with the humid and rainy habitats favorable for frogs, and the profuse rain providing the frogs a long reproduction stage makes Taiwan one of the best places for frog-watching.

According to Yi-ju Yang, Chairman of GIEEE of NHLUE, tree frogs in Taiwan used to be migrants from southern China during ice age. When the ice recedes, Taiwan and China are separated by the strait, and the tree frogs have evolved into island endemic species. The number of certain frog species drops when their habitats suffer inevitable damages, as in the case of *Rhacophorus arvalis* found only in Yunlin, Chiayi and Tainan counties that becomes the target of desperate rescue by the ecological circle lately. However, there are also endangered species that celebrate increasing recovery, as in the case of *Rhacophorus anarantiventris*.

蛙類一般棲息在潮濕溫暖的中低海拔山區，如雪霸國家公園的七家灣溪。(雪管處提供 俞錚暉攝)

Frogs generally stay in humid and warm regions of low and medium altitude, such as Cijiawan Creek in SPNP. (by Jeng-hao Yu, provided by SPNP)



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1 橙腹樹蛙醒目的橘色肚子。  
(李鵬翔 攝)  
*Rhacophorus aurantiventris* has the striking orange abdomen.  
(by Peng-shiang Li)

2 橙腹樹蛙性好隱密，多棲息於高大喬木上。(李鵬翔 攝)  
*Rhacophorus aurantiventris* like living in hidden place. (by Peng-shiang Li)

蛙類一般棲息於溫暖潮濕的中低海拔山區與平地，靠皮膚呼吸的牠們，對於環境的溫濕度非常敏感，環境惡化動輒就會危及生存。而台灣的國家公園棲地保持狀態良好，到國家公園賞蛙就成了最佳選擇；其中以陽明山的蛙種最為豐富，海島型的金門、東沙則比較少見蛙類蹤跡。根據外部型態與骨骼結構，台灣的蛙類可分為以下五大科：

Frogs generally stay in warm and humid regions of low and medium altitude as well as plains. Breathing through their skin, they are very sensitive to the temperature and humidity of their surroundings, and so are prone to be endangered by the deteriorated environment. With well-preserved habitats for frogs, the national parks in Taiwan are the best places for frog-watching. While Yangmingshan has the most diversity of frog species, the Kinmen and Dongsha are less favored by frogs. According to their physical appearance and skeleton structure, frogs in Taiwan can be sorted into 5 families:

## 1. 赤蛙科 Family Raniiidae

數量最多；有修長的後腿，善於跳躍；通常在地面活動，所以身體顏色多半是綠色或也夾雜一些褐色。赤蛙非常平易近人，是除了蟾蜍之外，和人類關係最密切、最容易觀察的蛙類，不論在都市、住家、稻田、平原、森林都能發現牠們的蹤跡。

As the most populated frog family in Taiwan, they have long hind legs and hence good at hopping. They are active on land and so their skin color is usually green with a brown part. Besides toads, frogs of family Raniiidae are easily accessible and observable by human, and they can be found anywhere in the city, residential area, rice field, plain and woodland.

## 2. 樹蛙科 Family Rhacophoridae

生活在山裡的喬木或灌叢間，姑婆芋葉片上、地表隱密的地方也是樹蛙的藏身之處。平日晝伏夜出，到了繁殖季節就會大舉遷移到山林附近的池塘、水溝、稻田或溪流，進行轟轟烈烈的求偶。其特徵是指（趾）端膨大成吸盤狀，以利抓住樹枝。樹蛙具有良好的保護色，面對敵人的策略是以不變應萬變，且因活動範圍小，遷移能力差，很容易因為地理上的隔離而產生新種。

They live in the mountains, in trees, bushes and on leaves of the giant elephant's ear as well as any hidden place on land. Active only at night, the tree frogs move during reproduction stage to ponds, gutters, rice field and streams and start a spectacular mating call. They are characteristic with cupuled toes to hold onto tree branches. Since tree frogs have protective camouflage, their only strategy when encountering enemies is staying unresponsive. They are prone to evolve into new species caused by geographic insulation due to their limited sphere of activity and inept migration.

## 3. 狹口蛙科 Family Microhylidae

外觀呈現小頭、小嘴、身體圓胖、四肢短小，很像日本相撲選手的狹口蛙，可是挖洞高手。由於總在下雨之後鳴叫，又有「雨蛙」之稱。

An excellent hole-digger, it resembles a sumo athlete for its small head, small mouth, plump body and short limbs. Microhylidae frogs are nicknamed "rain frogs" because they often call after a rain.

## 4. 樹蟾科 Family Hylidae

外形像樹蛙，骨骼結構接近蟾蜍，台灣僅發現「中國樹蟾」一種。

They look like tree frogs but have a skeleton structure similar to that of toads. *Hyla chinensis* is the only species of this family found in Taiwan.

## 5. 蟾蜍科 Family Bufonidae

體型肥胖，皮膚有毒，身體布滿大大小小的疙瘩，這些疙瘩與眼睛後面特別突起的耳後腺，都是毒液集中的地方。生氣或禦敵時，會吸氣把身體鼓成一個圓球，並抬高四肢作伏地挺身狀，還會發出「嘶嘶」的噴氣聲，但其實那是虛張聲勢，只有在被咬時，蟾蜍的耳後腺才會分泌毒液，好叫敵人放掉牠。事實上，蟾蜍還是田間最好的殺蟲幫手。

Frogs of family Bufonidae have lumps all over their poisonous skin, as venom concentrates in these lumps and the protrusive parotid glands. When irritated or defensive, a Bufonidae toad would blow its body into a ball by inhaling air, lift its body as if doing pushups and make hiss sounds, but that's all bluffing. Only when captured it would secrete venom from the glands to make the enemy let go of it. In fact, Family Bufonidae are best insect-killing helpers in the rice field.



### 台北樹蛙 *Rhacophorus taipeianus*

▶▶▶ 陽明山國家公園 YMSNP

體長4~6公分，屬中小型樹蛙，背部呈現綠色，腹面為白色，股部內側為黃色，帶有一些小黑斑；為台灣特有種、保育類動物。

Also called Taipei green tree frogs, these small- and middle-sized tree frogs have a body 4 to 6 cm in length, with green back, white belly, and yellow in inner thighs with black specks. They are endemic and protected animals.

普遍出沒在台灣中部以北的中低海拔山區及平地的台北樹蛙，因被發現的地點為台北縣樹林鎮而得名，是台灣蛙類中第一種由台灣學者發現、命名的種類。習性為冬天繁殖、夏天睡覺，繁殖期約從10月到次年3月。平常居住在樹上或樹林底層，繁殖時期雄蛙才會遷移到樹林附近的靜水域，並在水邊的草根、石縫或落葉底下挖洞鳴叫，以吸引雌蛙。牠們挖洞的方式十分可愛，是利用自己的身體繞圈打轉，轉出洞來；而求偶時的鳴叫聲長而低沉，是陽明山國家公園在冬天唯一可以聽見的蛙鳴。

台北樹蛙有趣的地方在於，雌蛙偏好叫聲低沉、體型大的雄蛙，因此年輕或體型較小的雄蛙有時乾脆捨棄挖洞求偶，直接爬進已經獲得配對的其他雄蛙洞裡，與其他雄蛙共享一隻雌蛙，這是弱勢雄蛙的交配策略。

Being the first species discovered and named by Taiwan scholars, the Taipei green tree frogs are initially found in Shulin Town of Taipei County but popular in mid and low altitude area and plains in northern Taiwan. They sleep in summer, reproduce in winter from about October to next March. Usually they live in the tree or bottom woodland, but during reproduction stage the male move to still water area near the woods. They dig holes beneath the leaves, grass by the water and crack between rocks, and call from inside to attract the female. They have an interesting way of digging holes by turning their bodies around the ground. Their low and long mating calls are the only frog calls heard in the winter in YMSNP.

It is interesting that as the female frogs favor large males with low calls, those young or small males would save the effort of digging and crawl directly into the holes dug by the other espoused males to share the same female. It is a mating strategy of the disadvantaged male frogs.



## 梭德氏赤蛙 *Pseudoamolops sauteri*

▶▶▶ 雪霸國家公園 SPNP

體長4~6公分，耳朵周圍有一黑色的菱形斑，並形成一個黑眼罩；背部呈現褐色或灰褐色，有一小小的八字型黑斑。

It has a body 4 to 6 cm in length, with a black diamond stripe around the ears like an eye-mask, brown or taupe in the back and a wedge-shaped small black spot.

為台灣蛙類的高山族，可生活在海拔200公尺到3,000公尺間，分布極廣。因屬溪流繁殖，其生存的竅門就是「黏」，指（趾）端膨大成吸盤狀，卵塊成球狀有黏性、蝌蚪腹面也有吸盤。梭德氏赤蛙的鳴叫非常小聲，很容易被潺潺溪流聲覆蓋，所以牠們不用叫聲來吸引雌蛙，而改用搜索的方式，進而產生許多有趣的求偶場面。例如因為雌蛙數量極少，加上雄蛙用牠不怎麼高明的眼力搜尋，所以經常發生一大群雄蛙爭抱一隻雌蛙的烏龍事件，直到這隻無辜的雄蛙發出「給」的叫聲，表示「我也是公的」時，眾蛙們才一哄而散，繼續尋找下一個目標。

梭德氏赤蛙在秋末到初春繁殖，約在每年9月到次年3、4月，尤其在9月底時，白天有時就可聽見多達1、2百隻的群聚蛙鳴。這時節也是櫻花鉤吻鮭的繁殖期，櫻花鉤吻鮭以梭德氏赤蛙的卵為食，若在此時造訪雪霸國家公園，將能同時見到櫻花鉤吻鮭繁殖覓食與梭德氏赤蛙求偶鳴唱的盛況。

They are the alpine frogs that live in the expansive places 200 to 3,000m above sea level. Propagating in streams, they have developed a surviving skill of “adhesiveness”, with toes swollen into cupules, roe grouped into sticky balls, and abdomen with cupules. Their call is weak and often overpowered by the babbling stream water, so the male attract the female by searching instead of calling for, and many funny scenes are made this way. For example, with the number of female frogs so few and the poor eyesight of the male, sometimes a male is seen to be mounted by a group of fighting males. It is only when this innocent male calls out with a “gay” sound that indicates “I am also a male”, the others split and try to look for the next objective.

Frogs of *Pseudoamolops sauteri* family mate between late autumn to early spring. Every year from September to next March or April, especially in late September, the sound of 100 to 200 frogs' calls can be heard even during the day. It is also the reproduction time of *Oncorhynchus masou formosanum* that feed on the frogs' roe. If you visit SPNP at this time, you will witness a grand occasion participated in by the salmon feeding and the frogs mating.

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1 梭德氏赤蛙配對 (李鵬翔 攝)  
Mating of *Pseudoamolops sauteri*. (by Peng-shiang Li)

2 莫氏樹蛙露出豹紋紅內褲。  
(李鵬翔 攝)  
*Rhacophorus moltrechti* reveals the red striped underpants. (by Peng-shiang Li)





## 莫氏樹蛙 *Rhacophorus moltrechti*

▶▶▶ 太魯閣國家公園 TNP

屬中型樹蛙，體長4~6公分，眼睛虹膜呈紅色，大腿內側鮮紅且布滿黑色斑點為其特色；為台灣特有種、保育類動物。

Its middle-sized body length ranges from 4 to 6 cm. Featured with red iris in the eye and the inner red thighs covered with black dots, it is an endemic and protected species of Taiwan.

莫氏樹蛙也是台灣分布最廣的樹蛙之一，從低海拔到2千多公尺的高山都有，繁殖期則隨著地區而有所不同，分布於台灣北部及東北部，一般在春、夏兩季繁殖；中南部是夏、秋季；東部則是冬季到春季。每年10月到次年3、4月，在太魯閣國家公園的布洛灣、砂卡礑溪、天祥遊客中心都有莫氏樹蛙的蹤跡，春天也正是太魯閣百合花開的季節，此時造訪賞蛙、賞花兩相宜。

莫氏樹蛙的大腿內側鮮紅一片，布滿黑色斑點，被楊教授形容為豹紋紅內褲。「紅內褲」的功能不在炫耀，而是一種保護色，兩腿一伸露出炫目的紅色，具有嚇阻敵人的功效；腹部及側面則散布黑色的「老人斑」，年紀越大斑點越多。另外，莫氏樹蛙的叫聲像火雞，「呱呱——阿呱呱——呱呱呱呱」的一長串，十分有趣。

*Rhacophorus moltrechti* is the most widespread species of tree frogs in Taiwan from low elevation to mountains over 2,000m high. Their reproduction period varies in different places, usually in spring and summer in the north and northeast, summer and autumn in the central and south, and winter to spring in the east. Every year from October to next March and April, they can be found around Buluo Bay, Shakadang Stream and Tianhsiang Visitor Center in TNP. It is most ideal to visit in spring to appreciate the lilies in bloom and frogs in celebration.

The red inner thighs with black dots of *Rhacophorus moltrechti* are described by Professor Yang as “red striped underpants”, which are not intended for showoff but protection. It would stretch its legs to display the dazzling red thighs to scare the enemies away. The abdomen and lateral parts of its body are covered with black spots that increase with ages. Its serial calls resemble the quacking of a turkey.





### 斯文豪氏赤蛙 *Rana swinhoana*

▶▶▶ 玉山國家公園 YSNP

屬大型蛙，體長6~10公分，背部顏色變化多端，呈現綠色、褐色，或綠、褐色交雜，相當漂亮。身體修長，指（趾）端亦膨大成吸盤狀。

This large-sized frog has a body length between 6 and 10 cm. The color of its back varies from green to brown or a beautiful mixture of both. Its body is slender, and the toes grow into cupules, too.

為溪流繁殖型的蛙類，終年住在溪澗裡，通常在淺水區的石頭底下或石縫裡產卵，當胚胎發育到帶有尾巴的時期，看起來就像一顆可愛的綠豆芽，可惜不易見到。斯文豪氏赤蛙的繁殖期較長，約在2至10月，但以春、秋兩季最為活躍。牠們在繁殖期時，不會群聚和鳴，而是各自分散、彼此較勁，鳴聲此起彼落頗具聲勢；且因牠們如鳥鳴般的特別叫聲，所以又有「鳥蛙」之稱。如果到玉山國家公園一遊，在南安瀑布一帶可看見斯文豪氏赤蛙的蹤跡。

They reproduce and live in the stream, usually spawn beneath stones or in crevices in the shallow water. When an embryos starts to grow tails, it looks like a cute bean sprout but unfortunately not easy to be spotted by us. Their mating period is long from February to October but most active in spring and autumn. They don't make mating calls in groups, and compete separately with calls one after another. They sound like birds chirping and so also nicknamed "bird frogs". Pay a visit to YSNP at this time and you will find *Rana swinhoana* near Nan-an Falls.



### 艾氏樹蛙 *Kurixalus eiffingeri*

▶▶▶ 太魯閣國家公園 TNP

體長3~5公分，體色多變，可從淡褐色變至綠色，背部有X或H型深褐色斑。

With a size 3 to 5 cm long, its body color varies from light brown to green, with X- or H-shaped dark brown spots.

艾氏樹蛙最特別的是牠的育幼行為。雄蛙在交配後，會繼續留在竹筒或樹洞內，維持蛙卵的濕潤，避免其發霉，而雌蛙會定期回來產卵，以卵粒餵食成長中的蝌蚪。艾氏樹蛙也是分布於全島中低海拔山區的蛙種，西部繁殖期為每年3至9月；東部為9月至次年3月，在砂卡礑溪的三間屋一帶有許多竹籬，很容易見到艾氏樹蛙。

*Kurixalus eiffingeri* are most particular with their nursing behavior. After mating, the male will stay in the bamboo or tree hollow to help keep the moisture of the roe to avoid mold growth, and the female will return regularly to spawn to feed the growing tadpoles with. They are found in low- and mid-elevated mountains, with reproduction period from March to September in the west and September to next March in the east. They are easily spotted in the vicinity of Sanjianwu by Shakadang Stream where many fences are established.



### 史丹吉氏小雨蛙 *Micryletta steinegeri*

▶▶▶ 墾丁國家公園 KTNP

手臂極細，體長2~3公分，體色及花紋變化多端，為保育類動物。

These protected frogs have thin arms and a body length of 2 to 3 cm with variable skin colors and patterns.

史丹吉氏小雨蛙是狹口蛙科中，身材比較修長的蛙種，分布在低海拔的熱帶地區，如南台灣與台東有零散分布。每年5至6月，在墾丁國家公園會發現其蹤跡；遇到下雨時，在石灰岩洞或樹林底層也可見到，而其特別的叫聲，如蟲鳴「唧唧機唧唧」，一旦雨停則消失無蹤，要觀察牠們需要很有耐心。

*Micryletta steinegeri* has a body more slender than the other species in the same family. They are found in low-elevated tropical regions including southern Taiwan and Taitung in the East. Every May and June you can spot them in KTNP in a limestone cave or forest bottom when it rains. You need to be patient in observing them, for their special insect-like chirping calls disappear as soon as the rain stops.



### 盤古蟾蜍 *Bufo bankorensis*

▶▶▶ 全島分布 All around Taiwan

體型差異很大，體長從6~10公分都有，體色及花紋變化多端，體色有紅色、褐色或黑褐色；為台灣特有種。

Their size varies from 6 to 10 cm, while the skin colors and patterns range from red to brown and dark brown. It is a Taiwan endemic species.

盤古蟾蜍是地道的台灣特有種，其分布從平地到3,000公尺高山都有，唯獨金門國家公園例外。盤古蟾蜍的繁殖期在每年9月到次年2月，雄蟾求偶的方式是群聚到水域，主動出擊，彼此競爭激烈，有時也會發生誤抱同性的狀況。與青蛙的可愛形象相反，蟾蜍予人醜惡的印象，但牠們其實是無害的。下次遇到此種蛙類，不妨仔細觀察。

An authentic endemic species in Taiwan, *Bufo bankorensis* is distributed all around from the plain to 3000-m-high mountains except in KMNP. Its proliferating period runs from September to next February. The male gather around the water and compete fiercely, and embracing a male by mistake happens occasionally. Opposite to cute-looking frogs, toads give us an ugly impression. But actually they are harmless and friendly, as long as you don't eat them. Try to observe it carefully when you see one.

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