
The Bengal Breed

2022 CFA BAOS Presentation

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01 Introduction

The Bengal is a unique and captivating breed, their combination of intelligence, high energy and flashy appearance captivates fanciers around the world. As this presentation is geared toward helping exhibition professionals, judges, handlers, and exhibitors, it covers several points that should assist in better evaluation of individual animals. Photos are intended to help clarify and provide a better understanding of the Bengal standard in CFA.



01 Introduction

Historical goals of the Bengal breed: To create a miniature leopard, with the loving, dependable temperament of the domestic cat. From the humble beginnings of Jean Mill's first experimental breeding to one of the most registered and sought after breeds in the world, Bengals have come a long way in a relatively short span of time. Temperament remains of utmost importance, both in the show hall and in providing kittens and cats as companions to the public. Bengals now come in more patterns and colors than any wild species, through selective breeding we are able to adhere to a standard that places value on characteristics deemed important by experts, breeders and enthusiasts. With the advances in genetic testing and veterinary medicine, we are now able to more efficiently apply selection pressures to those colors we want to work with and diseases and genetic faults we seek to avoid. So, while it isn't necessary to look specifically at the Asian Leopard Cat as our muse, it is worthwhile to be aware that the goal of Bengal breeders is to selectively breed for a domestic cat with unique physical features similar to the stunning small arboreal cats that have long captivated us.



...“ the ALC cannot be used as the yardstick by which we measure our evolving domestic breed. Since they differ from one another, one would have to ask, "Which leopard cat?" "Which characteristics?" shall we emulate.” –Jean Mill

Defining Characteristics

The Bengal is one of the few breeds selectively bred to emulate traits of wild felids.

- High contrast, patterned coats coupled with a smooth, luxurious texture.
- Exotic facial appearance: Prominent eyes, large puffy nose leather, and rounded deeply cupped ears.
- The body is athletic, with substantial boning, larger hindquarters and a thick tail.



Defining Characteristics

High contrast, patterned coats coupled with a smooth, luxurious texture.

- Pattern alignment should always be horizontally or diagonally aligned.
- Any breaking of tabby stripes is desirable: legs, tail, neck.
- Clarity of coat is desirable. A moderate or high degree of ticking in the individual hairs will make the overall pattern seem muddy and indistinct .
- Countershading is a pattern adaptation from nature found throughout wild species.



02

Defining Characteristics

YES

Pattern Alignment:

Rosetted/ Spotted Tabby Pattern: Rosettes and spots shall be random, with horizontal flow to their alignment, and a pattern like no other breed.

- Should be free of rib barring, circular bullseye alignment of rosettes or spots. Pattern should appear to flow from caudal to rostral end of cat .
- *Marble Tabby Pattern: The Marble pattern is a modified classic tabby pattern with a horizontal, diagonal, or random pattern flow as opposed to a circular pattern flow; there should be no resemblance to the classic tabby pattern seen in other breeds.*
- Bengal patterns should never resemble an American Short Hair nor a Toyger.



NO

02

Defining Characteristics

Breaking of markings:

Spotting on the tail and legs, as well as broken necklaces are desirable, as it sets the breed apart from a domestic tabby patterned cat.

Domestic Mackerel Tabby



YES



NO



Defining Characteristics

Clarity of coat is desirable. A moderate or high degree of ticking in the individual hairs will make the overall patterns seem muddy and indistinct .

Ground color should be clear, and as uniform in color as possible. Contrast with ground color must be extreme, showing distinct pattern with sharp edges.

- Note the level of detail in the clearer coated cats, the crisp edges, obvious shading inside the rosettes and intense coloring.
- Ticking also mutes the color.
- Ticking and glitter are not linked traits.

YES



NO



Defining Characteristics

Countershading is a pattern adaptation from nature found throughout wild species.

A much lighter to white ground color on the whisker pads, chin, chest, belly, and inner legs, in contrast to the ground color of the flanks and back.

- Most tabby patterned cats have white chins, but in the Bengal we would ideally have this white to cream coloring to extend from the chin, down the length of the chest, throughout the belly and even the inside of the legs.
- Countershading can also apply to silvers and the seal series cats but it is not as apparent.



Defining Characteristics

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Countershading versus lockets

White hair in a countershaded pattern is often gray at the base.



White hair in a locket is white all the way to the skin. There is no pigment in the hair.



Yellow pigment can be seen on cream expressions of countershading.



Defining Characteristics

Wild cats (top row) do not have the basic Tabby M on the forehead. While this is not mentioned in the standard, it is something to select for that deserves extra merit as it emulates the wild species. It is achievable in the later generation cats (bottom row).



Leopard cat Pattern

On a Leopard cat the outside tram lines are continuous and darkly pigments. The inside lines are less prominent and do not connect with the outside tram lines.



Tabby Pattern

Anytime the outer lines connect to the inner lines, the pattern is likely coming from the tabby. Keep in mind that the outermost tram line is still the outermost tram line even if it breaks off.



Tabby Pattern

If the disconnect happens where the traditional tabby M connects and the inner lines are the more darkly pigmented lines, it is a tabby pattern.



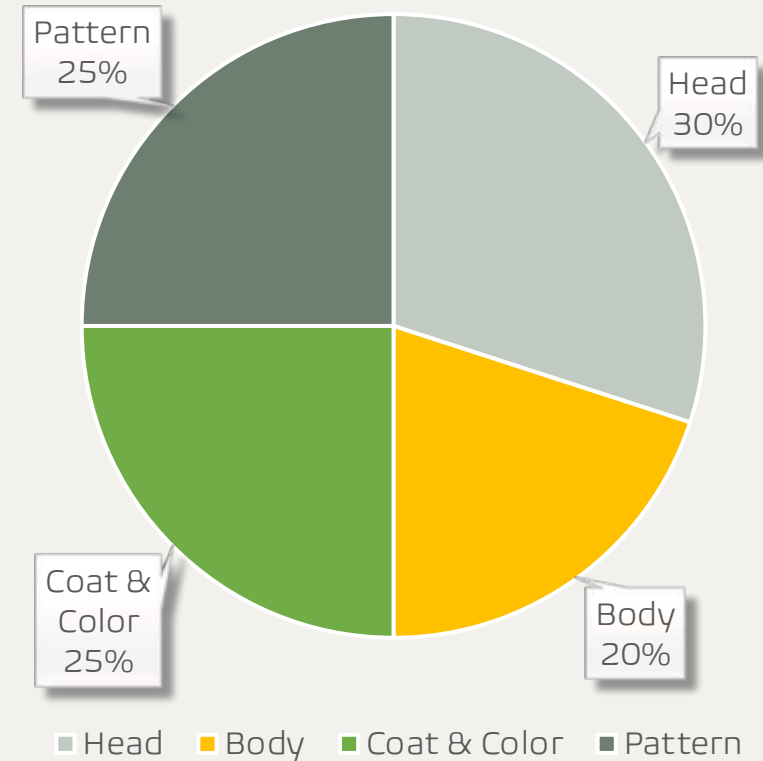
Progress Towards a Leopard cat Pattern

The pattern itself is half the battle. Bengals rarely have the space between the ears to keep the pattern straight on adult heads.

03 Points

	Point score
Head	30
Body	20
Coat & Color	25
Pattern	25
Total	100

Total Point Allocation



04 The Standard

Bengal	
POINT SCORE	
HEAD (30)	
Skull	5
Muzzle	6
Profile	4
Ears	6
Eyes	6
Chin	3
BODY (20)	
Boning	5
Musculature	5
Legs/Feet	5
Tail	5
COAT & COLOR (25)	
Texture	10
Coat Color	10
Eye Color	5
PATTERN (25)	
Pattern-Specific Point Allocation	15
Contrast	10
GENERAL: The Bengal is a medium to large cat with a sleek, muscular build. Boning is substantial. Hindquarters slightly higher than shoulders. The tail is thick, with rounded tip, and carried lower than the back. The Bengal's head, expressive nocturnal look, and stunning markings give the breed a wild appearance. The coat is like no other: short, close lying, soft, luxurious, and may be glittered. Bengals are alert and active, with inquisitive, dependable dispositions. Males are generally larger than females.	

Originally written as a standard that would split the points equally between type and coat elements, CFA's standard does place more emphasis on the coat than any other association. The challenge in evaluating is to ensure that CFA Bengals do not deviate from acceptable Bengal type yet have the highest quality coats and most correct patterns.

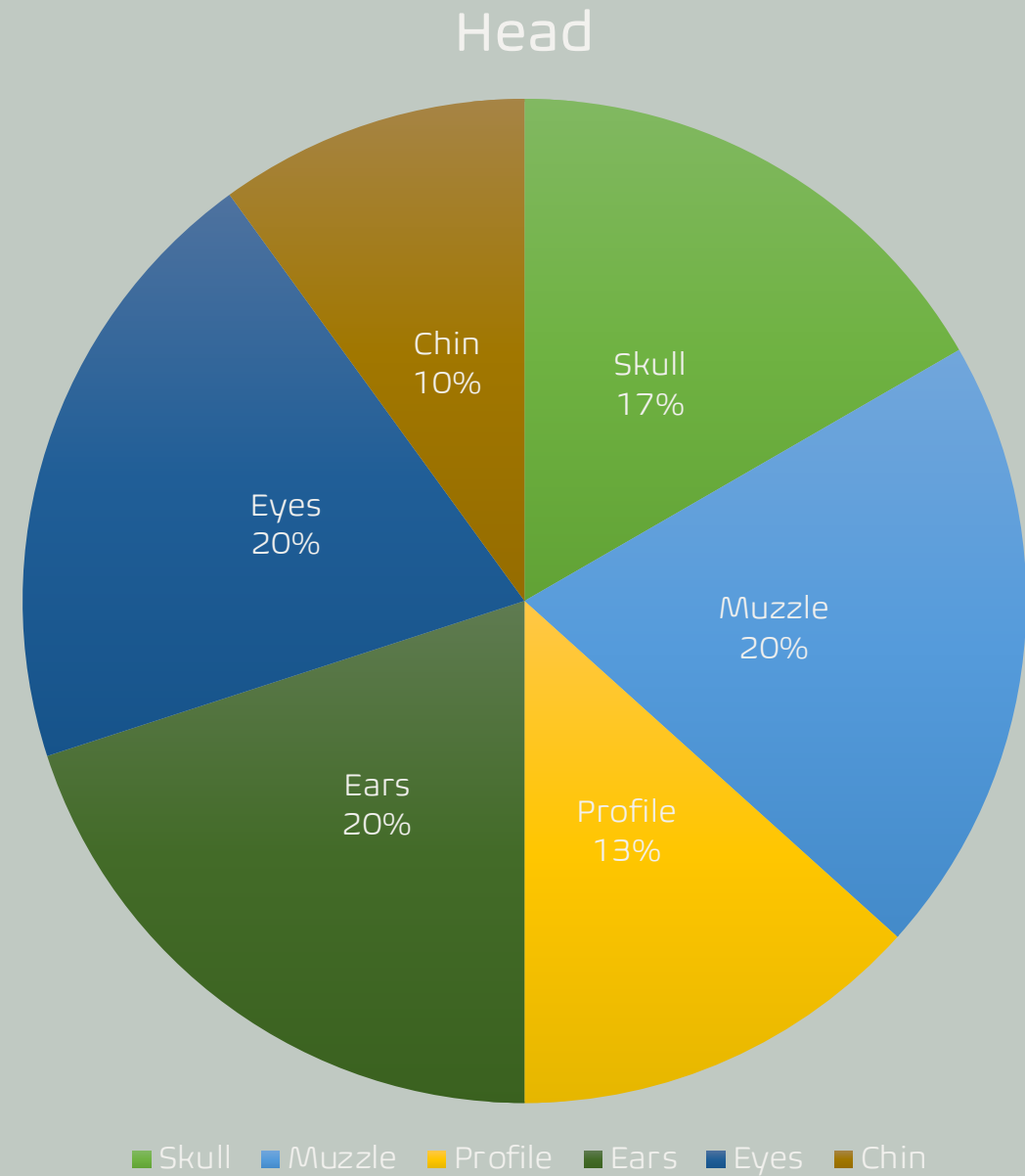
Association	%Points on Structure	% Points on Coat Elements
CFA	50	50
WCF	65	35
TICA	65	35
FIFE	60	40
ACFA	60	40

04

Head

Broad modified wedge with rounded contours, longer than wide, with high cheekbones. Slightly small in proportion to body, not to be taken to extreme. Top of skull flows back into the neck, with visible back skull. Allowance for jowls on mature males.

- Note that eyes, muzzle, and ears have the same point allocation. These important features are crucial to a well balanced Bengal head.



04 Skull / Head shape

- Broad modified wedge – more contoured and rounded than the wedge of more foreign breeds like a Siamese.
- Longer than wide – The length should be in the top 2/3, the back skull and the forehead of the cat.
- Somewhat small in proportion to the body.
- Allowance for jowls on mature males.
- Visible back skull, top of head should be rounded, not completely flat. Some angles of photographs or very muscular necks can obscure the back skull, it's important to feel the structure.

YES

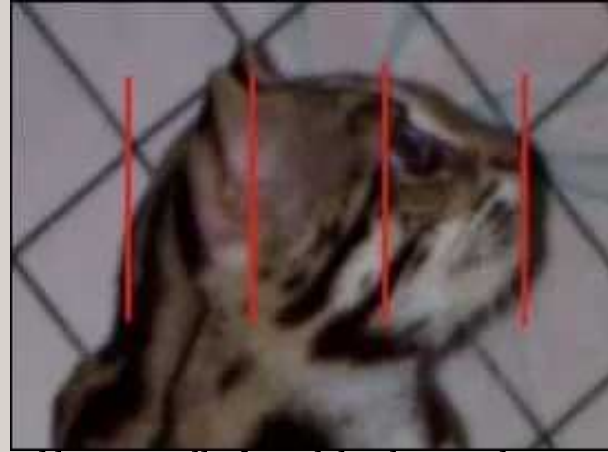


NO



04

Skull / Head shape



Consider the two sisters below: One has better skull shape. How does this affect the appearance of the head? The kitten on the left column, has a better head shape, in turn, her ears also appear more correct.



The Rule of Thirds:

This is a tool in evaluating placement of facial features of the Bengal cat first introduced by Les Hall of Junglebook Bengals in the early 90s.

Eyes and muzzle in the first third, forehead in the second third and ears and back skull are in the last third.

In evaluating the head shape of a Bengal, keep the following in mind:

- Ears should have a considerable amount of skull behind them. Proper cupping of the ears and the forward tilt with correct back skull allows for the ears to appear smaller.
- Forehead should be most of the middle third,
- Eyes and muzzle are in the same, front third. Eyes should be set closer to the nose than they are to the ears.
- While the Bengal head is supposed to be longer than it is wide, the majority of the length should be in the forehead and back skull. A longer muzzle will put the eyes too high in the face.

04

Muzzle & Nose

MUZZLE: Full and broad, with prominent whisker pads.

- Muzzle should never appear pointy.

NOSE: Large and Wide, slightly puffed nose leather, bridge of nose extends above eyes.

- Nose bridge should not narrow down to a pinched nose leather.
- Nose leather should protrude beyond the whisker pads and chin. Leather should appear moist, healthy and supple, never dry and cracked.

YES



NO



04 Profile

YES



Gently curved forehead to nose bridge . Nose may have a slight concave curve.

* Breed council has a proposal to clarify wording on the ballot, look for this to be updated in the near future.

- The top of the skull should be rounded to achieve this correctly, with flatter foreheads a brow ridge is more likely.
- There should not be a change in direction.
- Straight (but not Roman) profiles are desirable.

NO



04 Ears

YES



Medium to small, with a wide base, rounded tips being desirable. Set far apart, following the contours of the face in the frontal view, slight tilt forward in the profile view. Light, horizontal furnishings acceptable, tufts undesirable.

- Wide bases, should not narrow drastically to a point as this gives a pointy appearance.
- Set as much as on top as on the side of the head.
- Deeply cupped and tilted forward in a profile view.
- Lighter thumbprint (Ocelli) on back of ear .
- Worth 6 points, 1/5 of all of the points on the head.

NO



04 Ears

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How the forest shaped the ears

1. Shape - round, uniform in width, cupped
2. Set - as much on the side of the head as the top, angled slightly out
3. Size - should appear small due to forward tilt, but will have some size to the surface area if properly cupped and tilted forward.

Why?

Because the nocturnal arboreal cats have to hear and pursue a mouse running across a moss covered tree branch.

Their prey is

- Quiet = round, deeply cupped
- Beneath them = set, forward tilt
- Traveling through tree branches = size



04 Eyes

YES

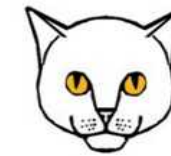


Shape is round to oval. Large, but not bugged, set wide apart, with a slight bias toward the base of ear, when oval in shape. Eye color independent of coat color except in Lynx Points, where Blue is the only acceptable color. Richness and depth of color is always preferred. * Breed council is debating changes currently, look for this to be updated in the near future.

- Nocturnal look – Size (large) and position are more important than the shape when the goal is to achieve a nocturnal expression. Eyes should be set in the lower third of the face.
- Large but not bugged: the cat should be alert or excited when evaluating in order to see the eye at its largest.
- Widely set- Slight bias toward the ear
- Richness and depth of color preferred.
- Worth 6 points, 1/5 of all the points on the head

EYE SHAPES

The shape of the eyes is due to the eyelids and other soft tissue surrounding them e.g. the extremely short muzzle of some breeds results in the teardrop shape. Many cats have eyes of indeterminate shapes.



Round



Oval



Almond



Lemon



Walnut



Rounded Almond



Tear-shaped



Hooded, or rounded triangle

CFA registerable Bengal vs. F1 hybrid- correct eyes are achievable with selection pressure!

NO



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How the forest shaped the eyes



The Leopard cat (top left) and the Margay (bottom left) live in forests on different continents, but their eyes are similar because they are **fit for purpose.**



Cats who hunt by the dappled moonlight in trees need eyes that are:

- Large
- Set forward on the face
- Large surface area to the lens

Notice the different eye structure on the Pallas cat (top right) and Serval (bottom right). They hunt at dawn and dusk in the glare of the sun.



The eyes are deeply set to protect them from glare.



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Why?

Because the nocturnal arboreal cats hunt in dappled moonlight, their eyes are structured to let as much light in as possible.

Their eyes must **let light in** which influences every aspect of their formation.

- Size
- Set
- Surface area of the lens

How the forest shaped the eyes

1. The eyes should be a dominating feature on the face.
2. To get the best look, play with the Bengals in their cages. The bright light on your judging table will be too bright for a nocturnal eye.
3. Assess the surface area of the lens from profile view.



04

Chin

YES



Strong, substantial, aligns with the tip of the nose in profile.

- Worth 3 points, the least of any one feature of the head.
- Keep in mind that the jaw structure and the muscles attaching to the chin also affect the visible depth of the chin, for this reason it's best to evaluate the chin at a relaxed position vs. manipulating any part of the head or neck.

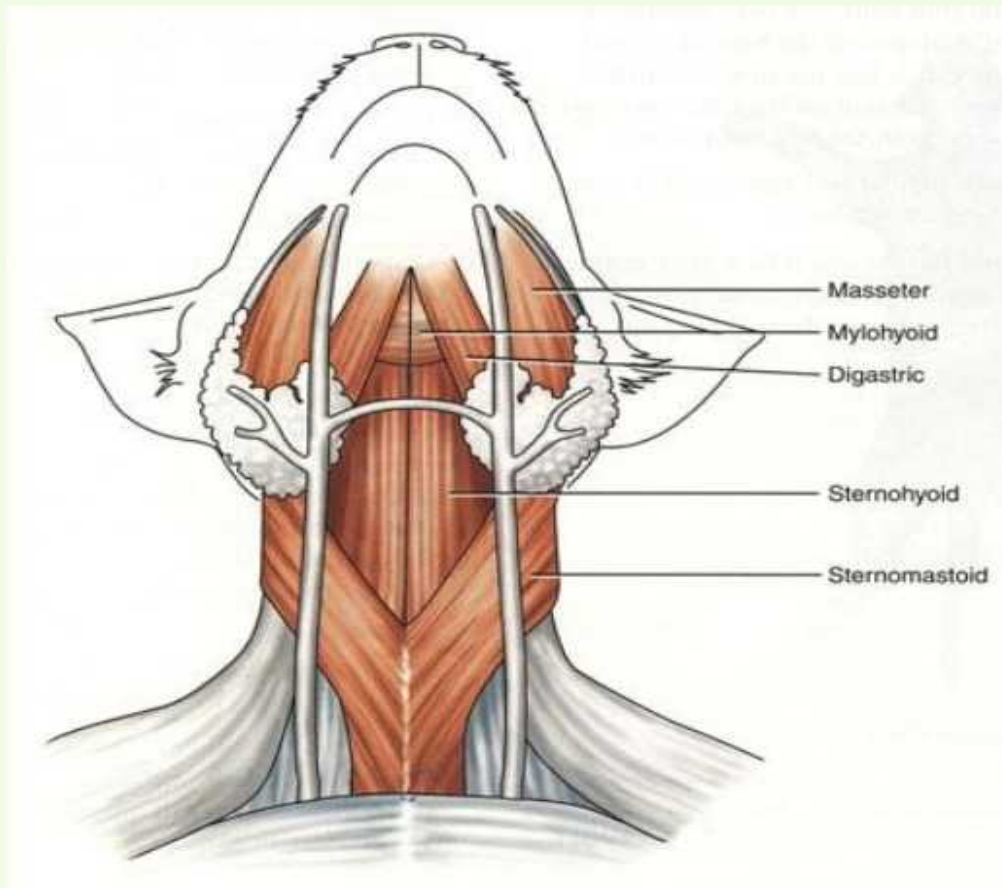
NO



04 Chin

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How the forest shaped the chin



The chin is the bottom attachment point of the jaw muscles. Bengal chin muscles are sometimes visible when the chin muscles are relaxed and drop forward.



04 _____

Body

YES



Long and substantial, muscular, particularly the males. Hindquarters slightly higher than shoulders.

- Correct body shape of a Bengal reflects the shape of a small forest dwelling jungle cat.
- Long and lithe, yet athletic and well muscled.
- Torso shape should be lean and no tendency toward barrel chest. No belly tuck in adult cats.
- Weight should be centered on the muscular rear legs, body should deepen towards the rear as a result of the primordial pouch and musculature.
- Longer rear legs.

NO



How the forest shaped the body



Primordial Pouch

Primordial pouches are not required. There is no preference for or against them. Please don't discredit a cat with pouches.



The unique trees of Asian forests have shaped the Bengal cat because trees in Asian forests are tall and widely spaced.

Many animals, including the small wildcats, that live in canopy of the Asian forests evolved a larger flap of skin that stretches out further allowing for longer jumps from tree branch to a tree branch as it creates a slight gliding ability. While all cats have a primordial pouch, the Leopard cat has morphed this into a larger feature that gives the Asian forest dwellers the ability to stay in the air a little bit longer to make those long jumps from tree to tree.

04

Body

Bone: Substantial, never delicate.

The heavier bone structure is especially evident in the legs, they should give an impression of a sturdy, well built cat.

Legs: Medium long, slightly longer rear legs.

Muscular.

A Bengal's legs are built for running , leaping , climbing and other athletic endeavors.

Paws: Large and round, with prominent knuckles.

The feet of the Bengal are proportionally larger than many other breeds, likely due to larger boning.

YES



NO



04 _____

Body

Tail: Thick, tapered at the end with a rounded tip. Medium in length, in proportion to the body.

- Tail set – Tail should be carried low with an allowance for “happy tail” when the cat is confident and alert and carries the tail straight up.
- Rosetted and spotted tails should be given extra merit.
- “Squirrel Tail” where the cat carries the tail over the back is not correct.
- Whippy, thin tails are not desirable and more prone to injury in an active cat.
- There is a wide variation of normal boning / musculature of tails in this breed, palpable differences should not be penalized unless it is an obvious deformity or change in direction.
- Handling should be limited to 2-3 passes down the length of the tail.
- Visible faults should always be disqualified.

YES



NO



(all examples on this page show faults)

Penalize

Rosetted/Spotted Tabby Pattern-

- Rosettes or spots running together vertically forming a mackerel tabby pattern.* Being rosetted does not make the vertical better, in fact, a greater percentage of the pattern is wasted by undesirable pattern flow.

Double, rosetted vertical bars



Vertical rib bar



Vertical rib bar



All marbles pictured are too circular.

- Marble Tabby Pattern- Circular bull's eye pattern.*

Bengals should never resemble the classic tabby pattern of other breeds. The pattern should be elongated and broken, no roundness should be seen in the alignment, only horizontal or diagonal flow.



All lynx points are lacking in body contrast as compared to their points

- Snow Tabby Pattern- Substantially darker point color as compared to color of body markings.* Although the lynx coloration is temperature controlled, the goal of the Bengal breed is to have as much uniformity in the color of the markings throughout points and body. The exact opposite from breeds such as the Siamese.



Disqualify:

Rosetted/ Spotted Tabby , Marble Tabby, Charcoal Tabby, Snow Tabby Patterns –

- ***Belly not patterned. Any distinct locket on neck, chest, abdomen, or anywhere else.*** Lockets are not a form of “white expression”. Countershading / white expression is the paling of the ventral sides of the cat, while still exhibiting normal pattern elements such as spotting on the belly, markings on the neck and inside of the legs.
- ***Kinked, or otherwise deformed tail.***

Because Bengal tails are to be thick and muscular, they are often able to mimic tension faults and hold their tail tips stiffly. Evaluations of the tail should be done from a relaxed position with all four feet on the table. Visible kinks should always be disqualified. Palpable irregularities are not an issue which impacts the health or function of the cat.

- ***Cowhocking.***

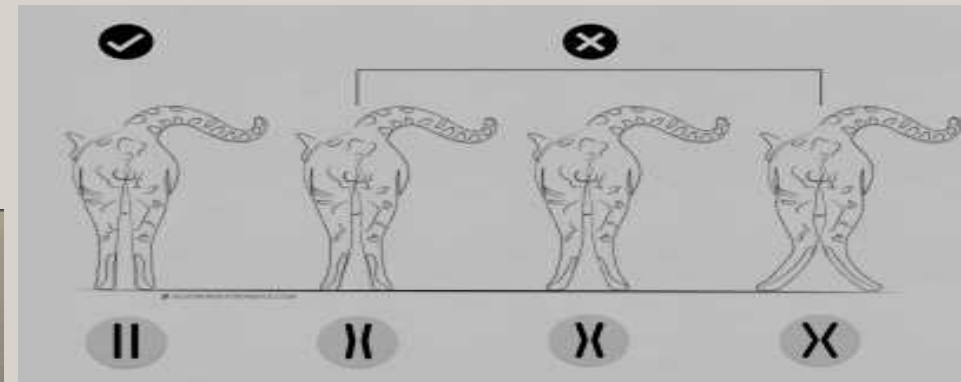
This a structural fault with a serious impact on function, it will impact the cat’s range of motion and quality of life.

- ***Crossed eyes.***

Most apparent with the seal series , this also impacts vision.



Locket within countershading



Exhibition Handling

- **Clear the judging space** : Bengals are a long and energetic breed; they are likely to knock things over in a frenzy for the judging toy.
- **Use a toy!** Bengals need that distraction to perform at their best. Especially with the kitten class, they need to have positive association with coming out on the table.
- Giving the cat all **four feet on the table** allows them to feel secure and relaxed, also aids in checking the tail conformation as they will be more apt to relax.
- Feeling the tail: A judge should be able to ascertain an obvious tail fault within **2-3 swipes down a cat's tail**. Rolling, pinching, and digging at the tail to find a fault will irritate the cat, give a negative association with handling on the judge's table and is greatly discouraged.



The Bengal Timeline

Jean Mill imports an ALC female. Later, in 1963, she crosses it with a solid black DSH male. The project is abandoned when Mill is widowed.



Dr. Willard Centerwall, who was researching the ALC's possible natural immunity to Feline Leukemia gives Mill the F1 hybrids that are the foundation of the breed as we know it.

Millwood Tory of Delhi is imported from India, introduces the gene for glitter into the breed. His sister, Tasha was imported at the same time and although not glittered, she likely carried the gene.

A new kind of Bengal is born, the marble pattern... Mill credits these cats with contributing the 'outlining gene' and the first rosettes were born from descendants.

Marble Bengals were accepted into TICA and the snows/ seal series in the subsequent years

1961

1980

1982

1985

1987

1992

1990s

1993

2016

2018

Mill began showing her Bengals in the new breed category of TICA, later her 2nd generation queen Penny Ante captivated audiences with her friendly temperament. Also in 1985, CFA retracted Mill's Indian Mau registrations as the pressure mounted against her wild hybrids.

After official recognition the Bengal breed is the fastest growing breed over the next decade.

TICA acceptance:

TICA admitted the breed into championship status, cats four generations removed from outcrosses are considered domestic and able to be shown. .

Accepted for Miscellaneous Status in CFA. Cats must be 6 generations removed to be eligible for registration and exhibition.

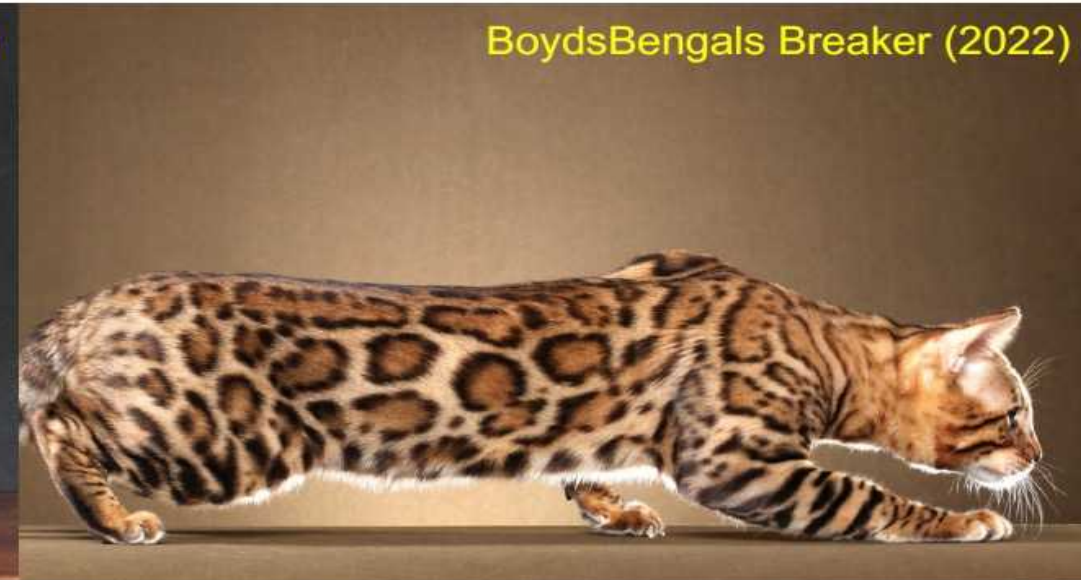
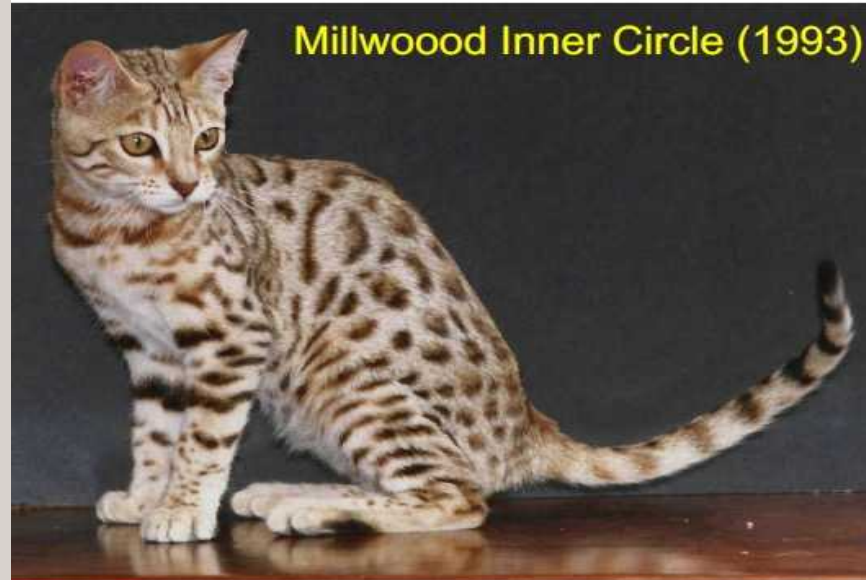
Bengals accepted in CFA. After 1 year in the Miscellaneous class, CFA's executive board votes to accept Bengals as a Championship breed in CFA.

06 Bengal History

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Coat pattern selection over breed history

The Bengal breed has managed to evolve from single spots to amazing rosetted patterns reminiscent of giraffes and leopards in a relatively short amount of time. This sparked research into pattern inheritance and the unique color variations seen throughout felines.



Progressive changes in coat color patterns over 30 years led to **diverse pattern types**



spotted



arrowhead



pawprint



clouded



donut

06 Bengal History

Possibly the most interesting genes discovered recently are glitter, and the charcoal pattern.

- The glitter mutation reduces *Fgfr2* (Fibroblast Growth Factor Receptor 2) expression, specifically in the hair follicle.
- Kaelin estimates that over 60% of Bengals are glittered and another 30% carry the gene for glitter.

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Gene discovery in Bengal (and other) cats



Glitter



Charcoal



Golden/Rufoused

Bengal specific -
Coat color & hair
morphology



Blotched/Marble



Ticked



Spotted



Rosetted



Orange/Calico



Sparble

Trait	Inheritance	Gene
Glitter	Single gene/Recessive	<i>Fgfr2</i>
Charcoal	Single gene	<i>ALC Agouti</i>
Golden (Bengals)	Multiple genes	<i>ALC Corin & Domestic Corin</i>
Tabby (Marble)	Single gene/Recessive	<i>Taqpep</i>
Ticked	Single gene/Dominant	<i>Dickkopf4 (Dkk4)</i>
Spotted	Multiple genes	????
Rosetted	Multiple genes	????
Calico/Orange	Single gene/sex-linked	<i>Rhogap</i>
Sparble	Multiple genes	<i>chrB1 (ALC) / chrD4 (Domestic)</i>

06 Bengal History

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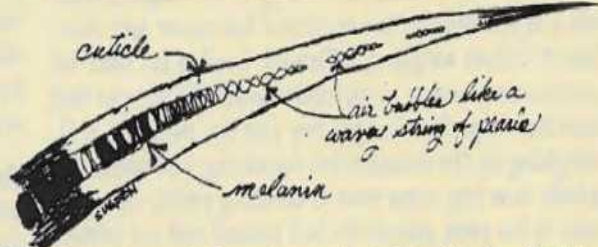
What's so captivating about glitter? It is one of the unique attributes of a large percentage of the breed, one that draws in breeders and enthusiast alike!

... The Importance of Glitter ...

by libbie kepp



The first recorded well glittered cat appears to have been Delhi, a highly rufoused domestic short hair "street cat" imported from Delhi, India in the early 1980's by Jean Mill and used extensively in early lines of Bengal.



Karen Sausman reports from microscopic studies of the fur of Delhi and others that the air bubbles responsible for the glittery light refraction are NOT in the same layer of the hair as in "satin" mice, etc. She and Sugden also see that many Bengals which do not exhibit glitter in ticked coats nevertheless have rudimentary bubbles. Glittered fur tends to have a much thicker, clearer outer layer, than non reflecting hair. This clear layer extends into and totally comprises a much longer clear tip that has no inner structure and little pigmenting (unless it is a ticked end).

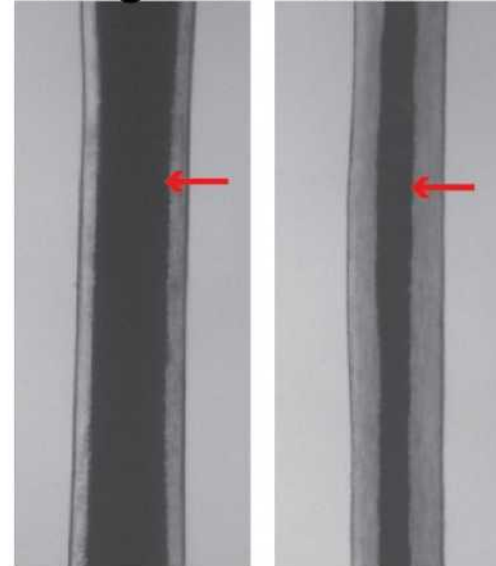
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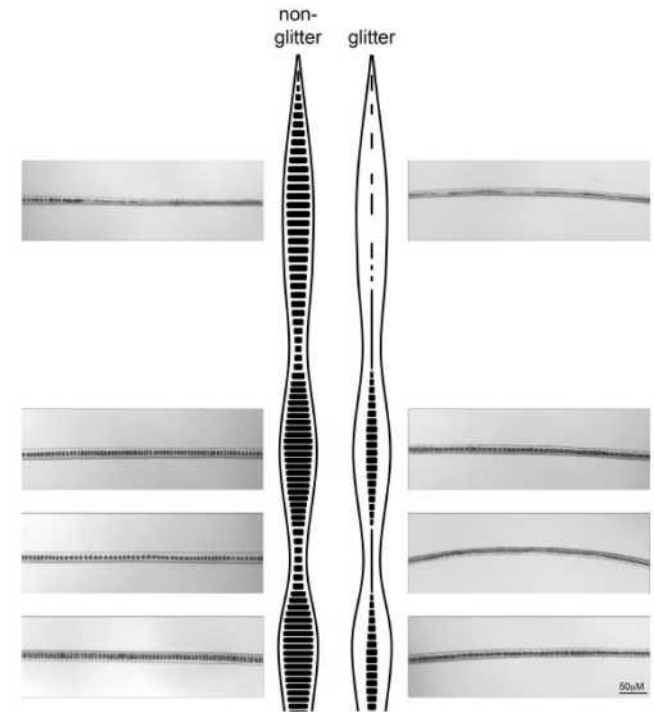
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Glitter hair structure

Nonglitter Glitter



Primary hairs - medulla (inner layer) is thinner with no affect on hair width



Awn hairs - transition from periodic discontinuous pattern to a fragmented pattern at hair tip

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