

APPENDIX 2<sup>1</sup>

## **ACF BREEDING POLICY FOR THE SCOTTISH FOLD (LONGHAIR AND SHORTHAIK) AND SCOTTISH LONGHAIR AND SHORTHAIK CATS**

Effective: September 2018

**THIS POLICY IS TO BE APPLIED IN CONJUNCTION WITH ACF (INC.) BY-LAWS PART 2 BREEDING AND REGISTRATION RULES<sup>2</sup>**

Also, cat breeders need to ensure compliance with current Federal and State government legislation and Local regulation applying to the keeping, breeding, management and selling of cats as well as ensuring their Member or Provisional Member Body requirements are adhered to.

### **Origins and History**

The original Scottish Fold cat was a white barn cat named Susie, who was found at a farm in Perthshire Scotland. Susie's ears had an unusual fold in the middle and when she had kittens two of them were born with folded ears. One was acquired by a neighbouring farmer and cat fancier William Ross who registered the breed with GCCF in Great Britain in 1966. Susie's only reproducing offspring was a female Fold kitten named Snooks who was also white; a second kitten was neutered shortly after birth. Three months after Snooks' birth, Susie was killed by a car. All Scottish Fold cats share a common ancestry to Susie.

All Fold kittens are born with straight ears, and those with the Fold gene will begin to show the fold usually within about 21 to 28 days of age. The kittens that do not develop folded ears are known as Scottish Shorthair cats and have straight or pert-eared. The original Scottish Fold cats only had one-fold in their ears, but due to selective breeding, breeders have increased the fold to a double or triple crease that causes the ear to fit the Fold's rounded head.

Smaller, tightly folded ears set in a cap-like fashion are preferred to a loose fold and larger ear. The large, round eyes and rounded head, cheeks, and whisker pads add to the overall owl-like appearance of the Scottish Fold. Despite the folded ears, Scottish Fold cats still use their aural appendages to express themselves.

The breed's distinctive folded ears are produced by an incomplete dominant gene that affects the cartilage of the ears, causing the ears to fold forward and downward, giving a cap-like appearance to the head.

### **Scottish Fold Health and Genetic Defects**

A cat with folded ears may have either one copy (heterozygous) or two copies (homozygous) of the fold gene (Fd). A cat with normal ears should have two copies of the normal gene (fd). Nonetheless, it cannot be assumed that all straight-eared Scottish Shorthair cats are (fd fd) because the incomplete dominant Fd gene does not always cause a phenotypic change (ie folded ears) in 100% of cats that have the Fd gene.

The fold gene does not limit its influence to the ear cartilages. It may affect all the cartilage in the body, resulting in osteochondrodysplasia, a disorder of the development of bone (osteo) and cartilage (chondro) producing abnormal growth of these tissues (dysplasia).

---

<sup>1</sup> 2018: Added: Breeding Policy for Scottish Fold and Scottish Longhair & shorthair.

<sup>2</sup> 2019: Updated cross references to be consistent with ACF (Inc.) Constitution and other By-Laws terms.

Research by Dr Jackson in England early in the breed's development in the 1960's, and reporting by Roy Robinson in 1970s, showed that the fold gene affected all of the body such that the bones of the tail become thickened and stiffened and the bones of the legs become thickened and arthritic. Subsequent veterinary and DNA studies have shown that cats with the fold gene, even heterozygous cats, develop cartilage health problems and may suffer degenerative osteoarthritis in their limbs, particularly the distal fore-and hindlimbs and tail. However, the severity of the skeletal lesions varies with each cat.

### **DNA testing**

There is a DNA test available for the fold gene.

All breeding Scottish Fold and straight-eared Scottish Shorthair cats must be DNA tested before being used in a breeding program. This is to avoid breeding homozygous Scottish Fold cats or producing homozygous Fold kittens (Fd Fd) as these cats appear to have the most severe skeletal degeneration.

The aim in producing Scottish Fold cats is that they must have only one copy of the fold gene present that is to be heterozygous for the fold gene (Fd fd).

### **Breeding of Scottish Fold Cats**

Because of the nature of the fold gene, particularly in the homozygous condition **Scottish Fold-to-Scottish Fold must not be bred.**

Scottish Fold-to Scottish Fold matings have a 25% chance of producing homozygous Scottish Fold progeny and these homozygous progeny must never be produced.

**Only heterozygous Scottish Fold cats may be used in a breeding program.**

### **Outcrossing Scottish Fold cats**

The breeding practice for Scottish Fold cats must be that a fold-eared cat must always be outcrossed to either a straight-eared Scottish Shorthair cat DNA tested negative for the Fold gene (fd fd) or to a British Shorthair cat tested negative for all available DNA health tests for that breed, particularly Feline Autoimmune Lymphoproliferative Syndrome and Polycystic Kidney Disease.

### **Registration of Scottish Fold Cats**

Due to the serious health and welfare complications of the fold gene, kittens can only be registered when documentation is supplied to the registrar as to the DNA status of the parents.

**ALL** kittens from Scottish Fold matings must be listed on the ACF (Inc.) Member or Provisional Member Bodies' litter registration form, together with their microchip numbers.

**These notes are to be read in conjunction with the ACF (Inc.) By-Laws Part 2 Breeding and Registration Rules 14.5.28.5 for Scottish Folds.**

In summary it is important that breeders have a well-managed and well-understood breeding program for Scottish Fold cats. Breeders need to ensure that they are breeding for cats that have medium length legs, body and medium to long flexible tails. Also, the use of DNA testing for known coat colours and inherited diseases; radiology and veterinary advice and annual veterinary check-ups may assist breeders with identifying suitable healthy cats for Scottish Fold breeding programs. Any defective individual Scottish Fold cat or outcross cat should clearly not be used for showing or

breeding under any circumstances and breeders should seek veterinary advice about managing the health status of such cats.

### **Sale of Scottish Fold kittens**

- Fold-eared kittens must be de-sexed prior to sale unless they are to be used in an approved breeding program.
- Fold-eared kittens must not be sold to another person without the advice to that person of the health concerns due to the fold gene.

### **REFERENCES**

Folded ears. R Robinson. Genetics for Cat Breeders.1977; Second edition: 176-177.

Osteochondrodysplasia in Scottish Fold cats. R Malik et al. Australian Veterinary Journal. 1999; 77(2): 85-92.

Incomplete dominant osteochondrodysplasia in heterozygous Scottish Fold cats. Takanosu, M et al. Journal of Small Animal Practice 2008; 49(4): 197-199.

Breed-related disorders of cats. Gunn-Moore, D et al. Journal of Small Animal Practice 2008; 49(4):167-168.

Code of Practice for the Responsible Breeding of animals with Heritable Defects that cause Disease. Department of Primary Industries, Victorian Government 2009.

<http://agriculture.vic.gov.au/pets/domestic-animal-businesses/breeding-and-rearing-businesses/code-of-practice-for-the-breeding-of-animals-with-heritable-defects-that-cause-disease>.

Australian Cat Federation (Inc.). By-laws Part 3 Breed standards. Available from: <http://www.acf.asn.au/index.php?page=standards>.

Gandolfi B, Alamri S, Darby WG, Adhikari B, Lattimer JC, Malik R, et al. A dominant TRPV4 variant underlies osteochondrodysplasia in Scottish fold cats. Osteoarthritis Cartilage. 2016; 24(8):1441-50.