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Assessment of The Welfare of Hybrid Cats in Private Catteries and At Cat Shows: Development and Testing of a Practical Scale

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Abstract

Contemporary felinology is undergoing an intensive transformation, one of the key manifestations of which is the growing interest in the breeding of hybrid cat breeds that combine a pronounced exotic wild-type phenotype with behavioural characteristics acceptable for household companion animals. The focus of the present study is the Caracat breed, an interspecific hybrid of the caracal and the domestic cat. Despite the substantial commercial success and considerable popularity of these animals, questions concerning their welfare, particularly with regard to the early hybrid generations (F1–F2), remain an area of intense scientific and ethical debate. The stress assessment metrics adopted in clinical and research practice, such as the Cat Stress Score (CSS), which were developed for domestic cats, prove to be insufficiently informative and sensitive when working with hybrid forms whose ethological and physiological profiles deviate substantially from those of Felis catus. This paper presents the development and empirical validation of a new Hybrid Feline Welfare Index (HFWI), conceptually based on the updated Five Domains model. The empirical basis of the study was formed from a unique body of observations collected in the VIPLEO cattery, which currently occupies a leading position in the global practice of Caracat breeding and was the first to obtain fertile males of the fifth generation (F5). The sample includes data obtained under stationary housing conditions (Kyiv, Ukraine), in the extreme context of evacuating animals from an area of active hostilities (2022) and their subsequent adaptation in the USA (Florida), as well as the results of an analysis of show activity within the frameworks of TICA and CFC Sofi systems. Statistically significant differences in the adaptive potential of animals of generations F1 and F5 are demonstrated, which empirically supports the initial hypothesis that targeted selection up to the fifth generation can substantially mitigate most welfare risks characteristic of early hybrids. On the basis of the obtained data, practical recommendations are formulated concerning housing conditions, dietary features and ethical principles for exhibiting hybrid cats, and the need for a differentiated approach to the legislative regulation of this segment of felinological practice is substantiated. The paper will be of interest to felinologists and specialists in the breeding of hybrid cat breeds, veterinarians and ethologists, animal welfare experts, as well as specialised felinological and regulatory organisations engaged in discussions on the ethics of housing and breeding hybrids.

Keywords: Caracat, hybrid cats, animal welfare, Hybrid Feline Welfare Index (HFWI), Five Domains model, stress and adaptation, animal evacuation, show activities.

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1. Introduction

Felinology in the early twenty-first century is undergoing a pronounced paradigmatic shift: the focus is gradually moving from the conservation of traditional indigenous breeds to the purposeful design of new genetic constructs. The success of the Bengal cat, a hybrid of the Asian leopard cat and the domestic cat, has created a fundamentally important precedent, demonstrating that the integration of wild alleles into the gene pool of domestic animals can be stable and manageable, provided long-term and strictly controlled selective breeding is conducted [1]. On this basis, an entire group of hybrid breeds has been formed: the Savannah (serval × domestic cat), the Chausie (jungle cat × domestic cat) and, in the most radical variant, the Caracat (caracal × domestic cat). The market for exotic companion animals exhibits a stable upward trend: its global volume is estimated at 1.65 billion US dollars in 2024, with a projected increase to 2.49 billion by 2030 [3]. Demand for animals with a pronounced wild-type exterior combined with predictable and manageable behaviour is a key driver of the development of specialised catteries; however, this commercial vector inevitably comes into conflict with biological constraints and animal welfare imperatives.

The key methodological and ethical problem lies in the fact that hybridisation combines the genomes of species that diverged millions of years ago in evolutionary terms. The caracal is a mesopredator with a body mass of up to 19 kg, specialised for existence in arid biotopes of Africa and Asia, with characteristic features of energy metabolism, circadian activity, and spatial and territorial behaviour [2]. By contrast, Felis catus is a species that has undergone millennia-long selection for increased tolerance toward humans, life in anthropogenic landscapes, and high-density housing. The mechanical combination of these genomes in the first hybrid generation (F1) forms an organism that is, in a metaphorical sense, in a state of physiological and behavioural mismatch. Critics of interspecific hybridisation practices reasonably draw attention to the risks: discrepancy in gestation length (78–81 days in the caracal versus 63–65 days in the domestic cat), leading to prematurity of fetuses and dystocia; possible immunological conflicts between the maternal organism and the fetus; and the development of behavioural stereotypies when kept in an apartment environment [4, 5].

At the same time, the radical prohibition advocated by certain organisations [6] ignores the fact that hybrid animals already exist and require not declarative bans, but scientifically grounded, highly specialised assessment of their welfare and keeping conditions. Moreover, data from successful breeding programmes such as VIPLEO indicate that by the F5 generation the phenotype of the animals shows relative stabilisation, and psychophysiological parameters approach those characteristics of the domestic cat while maintaining a distinct wild aesthetics [7].

In this context, the scientific task is not reduced to a binary assessment of acceptability versus unacceptability, but consists in the development of nuanced, quantitatively calibrated tools that make it possible to objectively assess the welfare of each individual animal and to delineate boundaries of permissibility in the breeding and use of such animals.

The empirical base of the present study is the VIPLEO cattery. The choice of this facility is determined by its unique position in the field of hybrid felinology. VIPLEO became the first cattery to overcome the barrier of male sterility at the early stages of the hybrid series and to obtain a fertile F5 male Caracat, which made it possible to breed according to the Caracat × Caracat scheme without constant backcrossing with wild forms or other breeds (outcrossing). This creates unique conditions for the study of a relatively pure hybrid line in which stabilisation of the genome occurs primarily due to internal mechanisms of selection [14, 19].

The aim of the present study is to develop a valid, scientifically grounded and practically applicable toolkit for assessing the welfare of hybrid cats (using Caracats as a model), taking into account the specificity of different filial generations and the variability of keeping conditions.

To achieve this aim, the following **objectives** were formulated:

– To conduct a comparative analysis of behavioural and physiological patterns in F1 and F5 hybrids under standard cattery housing conditions.

– To adapt the Five Domains model to the specificity of hybrid cats by operationalising welfare indicators in the domains Nutrition, Environment, Health, Behaviour, and Mental State.

– To develop the Hybrid Feline Welfare Index (HFWI) scale and to test it on retrospective and current data from the VIPLEO cattery, including periods of show activity and evacuation.

– To identify statistically significant

correlations between the degree of domestication (filial generation) and stress reactivity in the animals.

–-To formulate practical recommendations on the housing, breeding, and show careers of hybrid cats for felinological organisations and private owners.

The scientific novelty of the study lies in the fact that, for the first time, a specialized Hybrid Feline Welfare Index (HFWI) scale has been developed and tested for the assessment of welfare in hybrid cats (using caracats as a model). This scale is based on the adaptation of the Five Domains model to interspecific hybrids and includes a comparative analysis of F1 and F5 generations, including under conditions of extreme stress (evacuation from a war zone and exhibition-related load). This made it possible to demonstrate the limitations of traditional scales (CSS) for hybrids and to substantiate differentiated recommendations for the housing, breeding, and exhibiting of such animals.

The author's hypothesis is based on the assumption that targeted selection of caracats up to the F5 generation ensures a qualitative transition from semi-wild animals to fully adapted companions, with stress levels and welfare comparable to domestic cats. It is also hypothesized that only a specialized index (HFWI), and not universal scales for Felis catus, is capable of adequately reflecting the stress reactivity and adaptive potential of hybrids of different filial generations.

The tools and concepts proposed by the author may have practical relevance in the United States, where the market for exotic companion animals and hybrid breeds is actively developing, and debates around their welfare and legal status are becoming increasingly acute: the HFWI scale provides veterinarians, breeders, shelters, and feline behaviour specialists with a standardised, scientifically grounded instrument for assessing stress and adaptive capacity in hybrids (including Caracats, Bengals, and Savannahs), which may underlie updated clinical protocols, TICA/CFA recommendations, and regional regulation; a differentiated approach to generations (F1–F5) will help US regulators and specialised associations to fine-tune rules for breeding, trade, and show participation, minimising risks to animal welfare and human safety, while experience in analysing hybrid behaviour under evacuation conditions will support the adaptation of protocols for the rescue and placement of animals during natural disasters and other emergencies that are relevant for the USA.

2. Materials and Methods

The study was designed as a comprehensive observational study with elements of retrospective analysis and was supplemented by a systematic literature review on hybrid cats and the welfare of small wild felids. The search strategy included queries in the PubMed, Web of Science, Scopus, and Google Scholar databases, as well as an analysis of official position statements of professional associations (veterinary and feline organizations), standards for the keeping of small carnivores in captivity, and TICA/CFA show regulations. The literature selection included original studies and reviews from recent years on the following topics: hybrid cats and their welfare, the Five Domains model, behavioural stereotypies and stress in captive wild felids, the use of hair cortisol and other stress biomarkers, specific features of reproduction and dystocia in cats, as well as documents addressing ethical aspects of hybrid breeding. In addition, specialized internet resources and official websites of catteries and feline organizations containing data on the development of the karaket breed group and the recognition of hybrids were taken into account.

The updated Five Domains model of animal welfare, adapted to the specific features of interspecific hybrids of the karaket and the domestic cat, was adopted as the conceptual framework for the development of the Hybrid Feline Welfare Index (HFWI). Based on the analysis of the literature and the authors' own observations, welfare indicators were identified within the domains Nutrition, Environment, Health, Behaviour, and Mental state, taking into account the species-specific needs of the caracal (space, type of diet, sensitivity to stressors, tendency to stereotypies). For each parameter, a four-point scale (0–3) was developed, describing gradations from welfare to marked distress; the preliminary version of the scale underwent pilot testing in a limited number of animals, followed by adjustment of wording and threshold values.

A separate component consisted of a retrospective analysis of animal behaviour and condition during evacuation from a zone of active hostilities (February–March 2022), where behaviour under acoustic stressors, tolerance of transportation, and the dynamics of recovery of appetite and normal activity after relocation were recorded. Behavioural indicators (presence and severity of stereotypies, type of responses to humans and novelty, social interactions, vocalization, space use, elimination behaviour) were coded using the developed behavioural scales and integrated into the overall HFWI score; to increase the reliability of the assessments, cross-assessment by independent observers was applied.

The physiological component included the analysis of available clinical data (results of routine veterinary examinations, information on reproductive status, cases of dystocia and post-vaccination reactions) and the determination of hair cortisol levels in a subset of animals as a marker of chronic stress, followed by comparison with behavioural indicators and housing conditions. The study was conducted in accordance with the principles of humane treatment of animals; all interventions were either non-invasive (observation and video recording) or fell within the scope of standard veterinary procedures and were not carried out specifically for the purposes of the study.

3. Results

Analysis of the initial background state of the animals in the cattery conditions revealed fundamental differences between filial generations, which clearly demonstrates the need for a differentiated approach to their housing and welfare assessment.

Group F1 (Caracat):The mean HFWI score was 2.8 ± 0.4, which indicates a moderately expressed decrease in welfare and a high sensitivity to environmental changes.

When housed in spacious enclosures with the possibility of full-scale outdoor activity (area greater than 30 m²), the proportion of stereotypic behaviours was minimal. However, seasonal restriction of access outdoors (in the cold season) led to an increase in the proportion of pacing to 15–20% of waking time. This dynamic is consonant with data obtained for wild felids in zoos, where a deficit of available territory is considered one of the key chronic stressors [8, 9].

F1 animals showed pronounced selective attachment to the primary caretaker while simultaneously displaying wariness toward unfamiliar people (level of wariness about 3 points on the behavioural scale). This confirms that socialization of F1 hybrids has a limited, personalized character and does not lead to the formation of broad social tolerance toward humans [20, 21].

Hair cortisol concentration in F1 on average exceeded the values of the control group of domestic cats by approximately 40%, which probably reflects a higher baseline level of physiological arousal and metabolic activity characteristic of wild species and their closest hybrids [10, 11, 22].

Group F5 (Caracat): The mean HFWI score for this group was 1.4 ± 0.2, while differences from the control group (Abyssinian cats) were not statistically detected, which indicates a high degree of adaptation.

The animals demonstrated a behavioural repertoire typical for Felis catus: resting and sleeping in open, easily observable places, active social play with conspecifics and humans, and absence of recorded stereotypes.

The presence of fertile males in generation F5, which represents a unique achievement of the VIPLEO cattery, can be regarded as an indicator of a high level of biological welfare, since reproductive function is one of the first systems to be suppressed under chronic stress [1, 24, 25].

Cortisol levels in F5 animals were within the reference values described for Felis catus, which indicates successful completion of physiological adaptation to captive conditions and the absence of chronicity of the stress response.

Below in Table 1 comparative welfare indicators will be presented.

Table 1. Comparative welfare indicators (compiled by the author based on [1, 6, 9, 11])

Indicator	F1 Caracat	F5 Caracat	Control (Abyssinian)	p-value (F1 vs F5)
HFWI (Total score)	2.8 ± 0.4	1.4 ± 0.2	1.3 ± 0.2	< 0.001
Stereotypies (% of time)	12.5 ± 4.2	0.5 ± 0.3	0.2 ± 0.1	< 0.001
Hair cortisol (ng/g)	48.0 ± 5.6	22.1 ± 3.4	20.5 ± 2.8	< 0.001
Recovery of appetite (h)*	14.5 ± 3.0	4.0 ± 1.5	3.5 ± 1.0	< 0.01

**Time to first food intake after a moderate stressor (change of enclosure)*

The events of February–March 2022 constituted a critical stress-loading test for the cattery population, allowing an empirical assessment of the limits of their adaptive capacities.

In F1 hybrids, explosions and air-raid sirens elicited a pronounced acute panic response (HFWI 5), manifested by chaotic dashing around the enclosure with a high risk of self-injury. F5 hybrids, by contrast, predominantly responded with a behavioral pattern of freezing followed by targeted search for shelter (HFWI 3), which represents a substantially safer and more energy-conserving coping strategy.

Prolonged confinement in carriers during evacuation (the relocation from Kyiv to the western regions of Ukraine lasted more than 20 hours) was tolerated extremely poorly by F1 animals. Cases of psychogenic alopecia (compulsive overgrooming) and complete refusal of food for up to 3 days after arrival at the new location were recorded. F5 hybrids, provided that familiar olfactory markers were preserved and a significant caregiver was present, restored a normal behavioral repertoire and appetite within 4–6 hours after placement in the new premises [14, 15].

Despite the extreme nature of the stressful situation, appropriately structured management (use of synthetic pheromones, darkening of carriers, maximal preservation of the habitual diet) made it possible to avoid lethal outcomes. At the same time, the obtained data indicate that F1 animals have low resistance to abrupt environmental change; their welfare proves to be rigidly tied to the stability and predictability of the territory [35].

Analysis of materials collected at cat shows (including shows under the aegis of the Rolandus Cat Club and other systems held in Ukraine before the onset of the war) revealed substantial limitations in the exhibiting of early-generation hybrids.

Participation of F1 hybrids in the show ring was generally accompanied by high HFWI values (4–5). Even with conscientiously performed early socialization, the combination of an intense olfactory background (high concentration of other cats), noise stress, and the need for close tactile contact with the judge elicited defensive reactions — growling, attempts to strike with the paw, and an inclination toward avoidance. This creates a risk not only of compromising the welfare of the cat itself, but also of threatening the safety of the judge [28]. In a number of cases, a compromise form of participation was practiced — presentation in the Evaluation class (assessment in the cage without being brought out into the open ring) [30, 34].

Caracats of the F5 generation, by contrast, exhibited a typical show temperament comparable to that of Bengals and Abyssinians. Their behavior in the ring was characterized by pronounced curiosity (HFWI 1–2), readiness to interact actively with the teaser toy used by the judge, and a calm attitude toward stretching and manipulations during examination. This indicates that by the F5 level selective breeding has effectively fixed loyalty to humans and increased stress resilience in public-space conditions [23, 26, 27].

4. Discussion

The data obtained demonstrate a key contradiction of hybrid breeding: the need to simultaneously manage the animal's exterior and behavioural profile. Purchasers who focus predominantly on visual characteristics often deliberately choose F1 hybrids because of their large size and pronounced morphological similarity to the caracal, without realising that together with the desired phenotype they inevitably acquire a complex of unadapted wild behavioural strategies. The analysis performed confirms that F1 hybrids, in their ethological status, retain the characteristics of semi-wild animals and require specialised housing infrastructure (outdoor or indoor enclosures, Whole Prey format diet), which in most cases is fundamentally unattainable under standard urban apartment conditions [1].

In contrast, the F5 generation can be regarded as the result of a successfully completed domestication selection process. Reducing the contribution of the caracal genome to approximately ~3 % while preserving key breed markers (ear tufts, characteristic pattern and tone of coat colour) leads to the formation of animals fully adapted to long-term cohabitation with humans in a domestic environment. The fertility of F5 males recorded at the VIPLEO cattery serves as a sensitive biological indicator of population welfare, since the reproductive system is the first to respond to genetic instability (Haldane's rule) and chronic stress, which manifests as reduced spermatogenesis quality and disturbances in mating cycles [7, 29, 31].

In F1 hybrids, a shorter digestive tract was identified, morphologically and functionally optimised for a high-protein animal-based diet and poorly adapted to a substantial proportion of carbohydrates. Attempts under evacuation conditions to switch such animals to commercial dry feeds (including holistic-class products) were accompanied by marked gastrointestinal disturbances, which in turn increased the overall level of stress and demonstrated the close relationship between Domain 1 and Domain 3 in the welfare model. For F5 hybrids, tolerance to commercial diets is significantly higher, which reduces the complexity of daily husbandry

and lowers the risk of nutritionally induced stress in owners with minimal experience [16, 17]. For all hybrid generations, and especially for early generations (F1–F3), biologically appropriate feeding (BARF/RAW diets) is considered a priority strategy for the prevention of gastroenterological disorders and the associated behavioural compromise [12, 13].

Based on HFWI data, we consider it necessary to revise the regulations governing the admission of hybrids to exhibition shows.

F1–F2: Participation in the general ring should be considered unacceptable from the standpoint of animal welfare protection. Demonstration shows in closed tents or video presentations, which completely exclude direct tactile contact with judges and minimise the impact of the spectator crowd, appear to be the optimal format.

F3+: Participation in general rings may be considered acceptable, subject to mandatory preliminary testing of the level of socialisation and resilience to show-related stress.

International organisations such as TICA and CFA already apply restrictive regimes to hybrids that do not have the status of fully recognised breeds (PNB/ANB classes), and the data obtained confirm that such restrictions have a serious, scientifically grounded basis [32, 33].

The experience of evacuating a cattery under conditions of military conflict goes beyond strictly felinological issues and affects matters of ex situ conservation of genetic resources. The preservation of the breeding nucleus (including F5 lines unique in their genetic profile and phenotype) under conditions of logistic collapse and a direct threat to life demonstrates that a responsible breeder community can in effect perform the function of a living reserve of the gene pool. At the same time, this clearly emphasises the vulnerability of large zoological collections in war zones and other crisis situations. The higher adaptability of F5 compared with F1 revealed under extreme conditions serves as an argument in favour of the view that domestic hybrids that have undergone intensified selection for behavioural plasticity have greater chances of survival and of maintaining welfare under anthropogenic catastrophes [15, 18].

On the basis of the work carried out, we propose implementing an adapted version of the HFWI scale for practical use by owners, veterinary professionals, and show judges.

The scale includes 5 key parameters, each of which is assessed on a four-point system from 0 to 3.

0: Optimal state (Normal).

1: Mild anxiety (Requires monitoring).

2: Moderate stress (Requires environmental/management correction).

3: Distress/Danger (Requires immediate intervention).

Spatial behaviour:

0: The animal freely uses all levels of space (floor, shelves and other surfaces), rests in open areas without signs of tension.

1: Prefers elevated levels, shows clear reluctance to descend to the floor.

2: Spends most of the time in a hiding place, restricting its activity zone to minimal space.

3: Stereotypic pacing is observed (>10 minutes of uninterrupted walking in a circle/along a trajectory) or a state of near complete immobility, approaching catatonia.

Response to humans (owner/judge):

0: The animal initiates contact, emits greeting vocalisations, and displays a relaxed, open posture.

1: Allows physical contact but is noticeably tense (ears held to the sides, muscles of the body and face moderately tense).

2: Seeks to avoid interaction, moves away from the person when contact is attempted.

3: Exhibits overt aggression (hissing, paw strikes, bites) or enters a state of uncontrolled panic with a risk of self-injury.

Feeding motivation:

0: Accepts food with good appetite in the presence of a person, without signs of avoidance.

1: Eats only in the absence of people; feeding in the presence of a person ceases or is markedly reduced.

2: Decreased appetite is observed; the animal selectively consumes only the most preferred components of the diet.

3: Complete refusal of food for >24 hours.

Elimination behaviour:

0: The litter tray is used consistently and

without accidents; defecation and urination occur in the designated place.

1: Isolated accidents, as a rule, correlate with insufficient cleanliness or untimely cleaning of the litter tray.

2: Vertical marking appears inside the living space (including in neutered animals), reflecting increasing tension and an attempt to strengthen control over the territory.

3: Defecation on elevated surfaces or sleeping areas (Midding) is regarded as an indicator of profound insecurity and pronounced discomfort.

Vocalisation and facial expression:

0: Soft, trusting gaze, frequent blinking, calm purring.

1: Pupils moderately dilated, gaze fixed and tense.

2: Loud, insistent vocalisation (meowing), intense growling-type sounds produced by activity of the diaphragm and abdominal wall.

3: Emergence of a specific barking-type sound (typical of the caracal and F1), prolonged howling, as well as marked pupil dilation to almost complete coverage of the iris, resulting in black eyes.

Interpretation of the total score:

0–3 points: Excellent level of welfare. The animal is adapted to current conditions; intervention is not required.

4–7 points: Moderate risk of problem development. Analysis and revision of the environmental enrichment system (Enrichment) and/or the interaction scheme with the animal are necessary.

8–15 points: Critical state. The animal is experiencing marked suffering. Immediate consultation with an ethologist and a veterinarian is required, as well as a revision of housing conditions, including a possible return to enclosure housing format for F1.

Subsequently, for illustrative purposes, Figure 1 will present which welfare domain makes the greatest contribution to the overall distress of F1 hybrids.

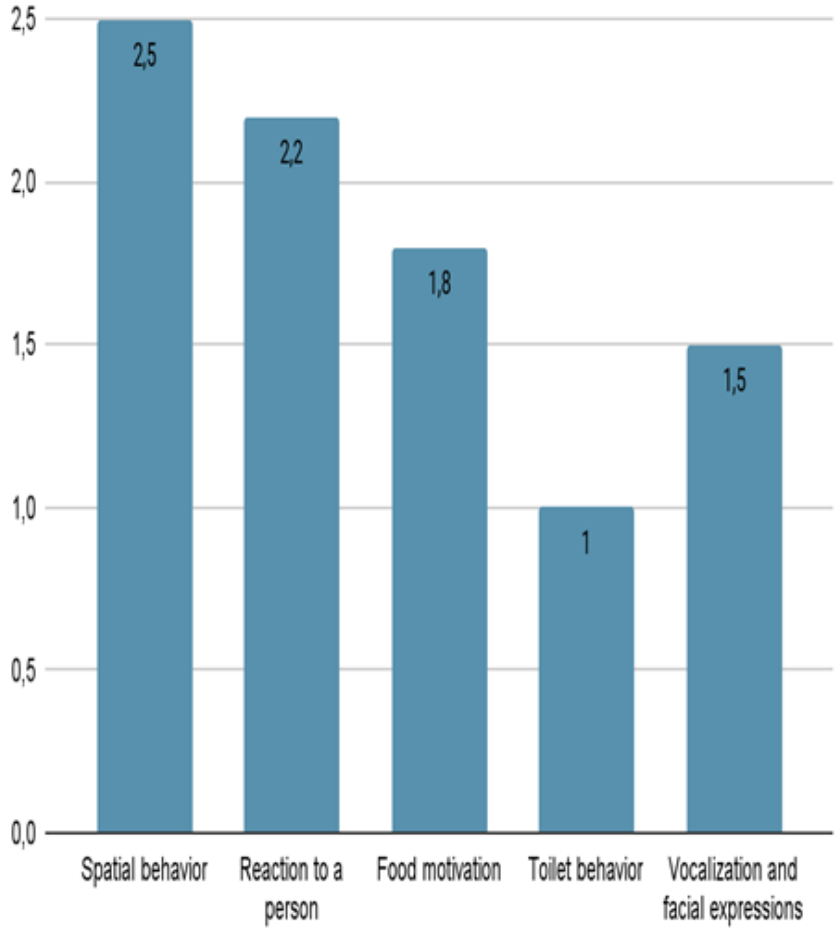

Fig. 1. Structure of the HFWI scale (example).

Below, in Table 2, husbandry recommendations will be presented.

Table 2. Recommendations for husbandry (author's data)

Parameter	Generation F1–F2	Generation F3–F5
Housing	Outdoor enclosure (min. 20 m²) with access to the house. Outdoor exercise is mandatory.	Apartment/house. An enclosure or a protected balcony (catio) is desirable.
Feeding	Raw diet (Whole Prey, meat mixes) with calcium/taurine supplements.	High-quality holistic diet or raw feeding.
Socialization	Early weaning and bottle-feeding (imprinting) are critically important.	Standard kitten socialization.
Litter box	Large litter trays with natural litter (sand, wood-based).	Standard trays.
Shows	Not recommended. Only presentations.	Permissible with prior preparation.

The conclusion is that the welfare of hybrid cats is directly correlated with their generation, which necessitates a differentiated approach to their husbandry and regulation. The F1 generation, in terms of ethological and physiological status, remains in the category of semi-wild animals, requiring specialized enclosure-based housing approximating zoo conditions, a Whole Prey diet, and exclusion from participation in open show rings. At the same time, F5 hybrids have successfully completed the process of domestication selection, demonstrating high stress tolerance, behavioral plasticity, and the ability to adapt to standard conditions of home keeping, while the fertility of F5 males is a sensitive biological indicator of their full welfare. Thus, ethical hybridization should focus on the stabilization of traits in later generations (F5+), and the developed HFWI scale serves as a necessary tool for objective assessment of welfare and for minimizing suffering in early-generation hybrids.

5. Conclusion

The study conducted on the population material of the VIPLEO cattery convincingly demonstrates that the welfare of hybrid cats is not a fixed characteristic, but a variable parameter directly modified by the filial generation.

Differentiation: F1 and F5 should be considered as two essentially incomparable categories of animals. For F1, conditions close to those in zoological institutions are required (in terms of spatial, behavioral, and management provision), whereas for F5 the standards of husbandry applied to a responsible domestic cat owner are sufficient. Ignoring this fundamental difference inevitably results in systematic suffering of the animals.

The targeted work of the author aimed at obtaining fertile F5 constructs a conceptual model of ethical hybridization: the formation of a stabilized breed in which the preservation of a wild phenotype is not accompanied by the cost of chronic stress and constant poor welfare for the animal itself.

The proposed HFWI scale functions as an effective tool for primary screening of welfare impairments, which can be used both by the professional community (veterinarians, breeders, experts) and by informed amateur owners, ensuring overall standardization of welfare assessment in hybrid cats.

The future of the caracat breed directly depends on the extent to which the felinological community is prepared to accept ethical constraints (abandoning mass breeding of F1 in favor of in-depth selective work on the quality of F5) and to integrate scientifically grounded methods of welfare assessment into everyday practice. Under conditions of global instability, examples of successful adaptation and continuity of operations of catteries such as VIPLEO acquire the status of significant case studies of resilience and professional commitment to the conservation and maintenance of unique animals.

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