

UDC 636.8:591.59

DOI 10.37000/abbsl.2026.120.05

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VOCAL COMMUNICATION IN CATS

Abstract

Cats are enigmatic creatures, but they are by no means silent. They possess their own system of communication, and learning to understand it can help establish trust, strengthen the human–cat bond, and even facilitate meaningful interaction with a companion animal. Cats use vocal signals to express their emotional states. Meowing, purring, hissing, growling, and many other sounds constitute the feline vocal repertoire, with each vocalization conveying a specific meaning depending on the context. This article presents a literature review on feline vocal communication, the characteristics of the domestic cat's vocal repertoire, the functional significance of different vocalization types, and current approaches to the interpretation of acoustic signals in the context of behavior, emotional states, and animal welfare. Vocalization is an important component of communicative behavior in domestic cats. Environmental conditions have a substantial influence on vocal behavior; therefore, wild and domestic cats differ in their patterns of vocal communication. The feline vocal repertoire is extensive, and the literature describes numerous vocalization types used to attract attention, communicate needs (e.g., hunger or pain), and express emotional states. Vocalizations can be analyzed using a range of discrete acoustic parameters, including pitch, frequency modulation, amplitude, and structural characteristics. Despite the widespread distribution of domestic cats, their vocal behavior has been studied considerably less than that of several other domestic animal species. Contemporary studies demonstrate that the characteristics of meows and other vocalizations may reflect stress levels, physiological needs, health status, and the quality of the relationship between the cat and its owner. At the same time, the available scientific literature demonstrates that feline vocalizations are context-dependent communicative signals whose interpretation requires the integrated assessment of acoustic characteristics, behavioral expressions, and situational context. The study of feline vocalizations is of both theoretical importance for understanding the mechanisms of animal communication and practical significance for veterinary medicine, ethology, and the improvement of companion animal welfare. The review was based on a search of original scientific studies indexed in the international bibliographic databases Scopus and Web of Science, as well as publicly accessible electronic information resources, to identify and analyze evidence regarding feline communication, behavioral signals, emotional states, and methods for their assessment.

Key words: *Felis catus*, vocalization, feline behavior, animal welfare, communication.

Introduction

Despite considerable interest in the study of interspecific communication, only a limited number of studies have focused on the ability of domestic animals to interact and exchange signals with humans in the environment that became natural for them during the process of domestication - the human home [15].

For thousands of years, humans and cats have demonstrated mutual tolerance. The domestic cat (*Felis catus*) is one of the most widespread companion animals worldwide and maintains complex and diverse forms of interaction with humans. However, despite the close relationship between humans and cats, feline communication has been studied considerably less extensively than human - dog interactions [33].

Nevertheless, researchers continue to investigate the communicative behavior of these companion animals. Studies conducted over the past decade have advanced our understanding of cats' ability to recognize individual humans and their own names, as well as their use of multimodal signals during interactions with humans. Currently, research on feline vocal communication remains limited; only a small number of scientific studies have investigated how humans perceive and recognize cats' vocal signals. Public understanding of feline vocal communication remains insufficient, and these signals continue to be understudied despite their potential importance for veterinary care, animal welfare, and biodiversity conservation [22, 31].

Acoustic signals play an important role in the organization of animal behavior by enabling the transmission of rapidly changing and dynamic information over various distances. Cats possess one of the broadest vocal repertoires among domestic animals. Although cats are best known for their meowing, purring, hissing, and growling, the range of sounds they regularly produce is considerably more extensive. Depending on the context, cats can produce numerous types of trills and vocal sequences with subtle variations associated with their communicative intentions. Some vocalizations reflect positive emotional states, such as contentment and calmness, whereas others may indicate anxiety, fear, or aggression; however, all vocalizations provide information about the cat's emotional state [27, 29].

Vocalization is an effective means of expressing internal states and emotions and is closely associated with neural mechanisms responsible for emotional regulation in the brain. Feline vocalizations represent important indicators of emotional state that may be valuable for both veterinary professionals and animal owners. At the same time, accurate interpretation of vocal signals requires a thorough understanding of the characteristics of different types of vocalizations, as their misinterpretation may lead to an inaccurate assessment of an animal's condition and needs [1, 5].

Analysis of recent research and publications. In recent years, considerable research attention has been devoted to the study of the socio-cognitive abilities of domestic cats (*Felis catus*), particularly their capacity to interact with humans and employ various communicative strategies. Communication is considered one of the key processes underlying the establishment and maintenance of relationships between humans and companion animals. Current scientific evidence indicates that many

animal species are capable of effectively engaging in bidirectional communication with humans by adapting their behavior to the social environment [13].

Several lines of evidence support the existence of successful vocal communication between domestic cats and humans. These include: (1) the use of specific forms of meowing by domestic cats that are primarily directed toward human interaction; (2) the production of a distinctive type of purring when communicating with their owners, particularly in situations associated with feeding or soliciting attention; and (3) the ability of cats to discriminate between their owner's voice and the voices of unfamiliar individuals, indicating the presence of mechanisms for individual recognition of acoustic signals [19, 15].

Current research indicates that domestic cats use a wide range of vocal signals that serve diverse communicative functions. According to various estimates, cats are capable of producing more than 20–30 distinct types of vocalizations, including meows, purrs, growls, hisses, howls, chattering, and short greeting calls known as trills. Each of these vocal signals serves a specific communicative function and is produced depending on the animal's emotional state, motivation, physiological condition, and the social context in which the interaction occurs [7, 29]. Thus, feline vocal behavior represents a complex communication system that facilitates the transmission of information both between conspecifics and during interactions with humans.

Over the past decades, researchers specializing in animal behavior and psychology have conducted numerous acoustic observations and recordings aimed at analyzing and interpreting the vocal repertoire of domestic cats. One of the pioneering studies in this field was carried out by the American researcher Mildred Moelk and published in 1944. In her seminal work, Mildred Moelk conducted a comprehensive analysis of feline vocal behavior and proposed one of the first classification systems for cat vocalizations, identifying 16 major vocal categories associated with different behavioral and emotional contexts [16].

Subsequent studies have confirmed that the production of feline vocalizations is based on the function of the vocal apparatus, which includes the larynx, vocal folds, and the resonating cavities of the vocal tract. As in other mammals, sound is generated when airflow from the lungs passes through the vocal folds, after which its acoustic characteristics are modified by the oral cavity, tongue, lips, and other structures of the upper vocal tract. Acoustic analyses of feline vocalizations have demonstrated that parameters such as fundamental frequency, duration, and sound intensity vary according to the behavioral context and the animal's emotional state [3, 26].

At the same time, the process of sound production in cats has several distinctive features. Unlike humans, cats do not rely primarily on the tongue as the main articulatory organ for shaping vocal sounds. Instead, they modify the acoustic properties of their vocalizations by adjusting muscle tension in the oral cavity, larynx, lips, and nasal cavities. According to Mildred Moelk, cats are capable of producing a variety of vowel-like and consonant-like sound components by altering the position of the mouth and the resonance characteristics of the vocal tract. This enables them to

generate a diverse vocal repertoire that varies in frequency, duration, intensity, and emotional expression [16, 25].

Recent studies have also demonstrated that the vocal behavior of domestic cats is strongly influenced by their individual experience and living conditions. Cats that have lived in close contact with humans for extended periods generally use a greater variety of vocal signals than semi-feral or free-ranging cats. This difference is thought to be associated with the process of domestication and the adaptation of feline communicative behavior to interactions with humans. Furthermore, cats are capable of modifying the intonation, loudness, and duration of their meows in response to their owners' reactions, highlighting the remarkable plasticity of their communication system and their ability to adapt vocal signals to specific social contexts [9].

Another important area of contemporary research focuses on how humans perceive and interpret feline vocal signals. Despite the long history of human–cat coexistence, the ability of people to accurately recognize and interpret the meaning of cat vocalizations remains insufficiently understood. A better understanding of feline vocal communication has important practical implications for improving animal welfare, facilitating the early detection of stress and discomfort, and promoting more effective human–cat interactions.

The **aim** of the study was to analyze scientific literature concerning vocalization in domestic cats, summarize current knowledge regarding the types of vocal signals, their functions, mechanisms of production, and their role in communication with humans and other animals.

Presentation of the main research material. Evolution of vocalization in domestic cats. The domestic cat (*Felis catus*) represents one of the most successful examples of commensalism followed by domestication among animal species. For a long time, it was believed that the domestication of cats began in Ancient Egypt approximately in the second millennium BCE. However, modern archaeological and genetic studies indicate that this process started considerably earlier. One of the most important pieces of evidence is a human burial containing a cat, discovered on the island of Cyprus and dated to approximately 9500 years ago. Since cats were not native to Cyprus, it is believed that they were intentionally introduced by humans, suggesting that already established relationships between humans and cats existed at that time [6, 20].

Approximately 10,000–12,000 years ago, with the development of agriculture in the Near East, wild Near Eastern wildcats (*Felis silvestris lybica*) began to inhabit areas surrounding human settlements. Large grain stores attracted rodents, which in turn became a reliable food source for cats. This interaction was mutually beneficial: humans gained natural pest control, while cats obtained a stable source of food. Unlike dogs, which were actively selected by humans for specific tasks, the domestication of cats occurred primarily through natural selection, whereby individuals that were more tolerant of human presence gained advantages in survival and reproduction [20, 18].

During the domestication process, cats underwent not only morphological but also behavioral changes. One of the most important adaptations was the evolution of

vocal communication. Wild members of the Felidae family use vocal signals relatively infrequently. Most information is transmitted through scent marking, body posture, tail movements, ear position, and facial expressions. Vocal signals are primarily used in interactions between mothers and kittens or during the mating period [2].

Unlike wild felids, domestic cats have significantly expanded their use of vocal signals during interactions with humans. It is suggested that one of the reasons for this development was the emergence of the ability to adapt their communicative behavior to the human-created social environment. During domestication, individuals that were more tolerant of human presence and more effective at attracting human attention through vocal signals may have gained advantages in terms of access to resources, protection, and care. As a result, a specialized vocal communication system gradually evolved, specifically adapted for interactions with humans [19, 15].

Vocal signals of cats. Domestic cats possess a complex system of vocal signals that serves different communicative functions. It has been suggested that cats have two functionally distinct sets of vocal signals: one primarily adapted for communication with humans and another inherited from their wild ancestors and used mainly in interactions with other animals. Cats frequently rely on vocal signals to transmit information both to humans and to conspecifics. Through these signals, they can express a wide range of emotional states, from threat and defensive behavior to attention-seeking and social contact. Different situations are associated with specific types of vocalizations. The acoustic frequency of feline vocal signals can vary considerably, ranging from approximately 75 to 1520 Hz [29].

Cats use several mechanisms to produce vocal sounds. The vocal repertoire of domestic cats was described by Mildred Moelk (1944) as exceptionally diverse in terms of acoustic characteristics and behavioral patterns. These vocalizations may occur in various contexts and reflect the internal state, motivation, and emotional condition of the animal [16].

Vocalization is an important means of expressing the emotional state of an animal, as it is closely associated with neural mechanisms involved in emotional regulation. Therefore, vocal signals can serve as informative indicators of feline emotional states in veterinary practice and everyday animal care. However, accurate interpretation of these signals requires a comprehensive understanding of their acoustic characteristics and functional meanings [1].

There are situations when a cat's vocalizations may resemble those of birds. This commonly occurs when a cat observes birds through a window. Chattering, trilling, and chirping are closely related types of feline vocalizations. Cats may also produce these sounds while playing with toys or observing other household animals, such as hamsters [2, 8].

Chirping is a short, high-frequency vocalization produced by domestic cats that is primarily associated with positive social interactions, greeting behavior, maintaining contact with kittens, or attracting attention. In some situations, cats also produce similar interrupted vocalizations, commonly referred to as *chattering*, while observing potential prey. This behavior is thought to be associated with predatory arousal.

Chirping is acquired early in life, as mother cats frequently use this vocalization to attract the attention of their kittens. In adulthood, cats typically produce chirping sounds when they are highly focused on an object or event and may also use them to attract the attention of other individuals. Chirping may therefore indicate excitement, heightened interest, or anticipation [21].

Chirping vocalizations are often voiceless, meaning they are produced without vibration of the vocal folds. Feuerstein and Terkel (2008) described chirping as a short, high-frequency vocalization characterized by a rising pitch at the end. The term *chirping* was adopted because of its resemblance to the vocalizations of birds or the squeaks of rodents. These vocalizations may occur either as single calls or as a series of repeated sounds [8].

Thus, chirping is a specific high-frequency vocalization of domestic cats that serves an important communicative function and is used in various behavioral contexts. Its distinctive acoustic characteristics, together with its association with positive emotional states and exploratory behavior, indicate the important role of this vocalization in facilitating effective communication both between conspecifics and during interactions between cats and humans.

Chattering is a characteristic vocalization of domestic cats that is most commonly observed in the presence of potential prey, particularly birds and small rodents. This vocalization is produced through rapid, rhythmic, and repetitive movements of the lower jaw while the mouth remains partially open, resulting in a distinctive teeth-clicking sound. These vocal sequences are typically emitted in repeated series and may occur in combination with other vocalizations or variations of chatter that differ in duration, frequency, and intonation [26, 27].

The precise function of chattering remains a subject of scientific debate. One hypothesis suggests that this vocalization reflects a state of heightened predatory arousal and frustration when a cat observes potential prey but is unable to capture it. Other researchers propose that teeth chattering may represent a remnant of instinctive predatory behavior associated with preparation for the killing bite or may mimic sounds produced by prey. However, these hypotheses have not yet been conclusively confirmed by experimental evidence.

Chattering is most frequently observed when domestic cats watch birds through a window, small mammals, or other rapidly moving objects. It may also occur during play with toys that simulate prey, further supporting its close association with predatory motivation. The production of chattering is typically accompanied by a characteristic hunting posture in which the cat fixes its gaze on the target, directs its ears forward, tenses its body muscles, slowly moves its tail, or remains motionless immediately before a potential attack [27, 33].

Thus, chattering is regarded as a specific component of the predatory behavior of domestic cats, reflecting a high level of emotional arousal and readiness to capture prey. Although the biological significance of this vocalization has not yet been fully elucidated, most researchers associate it with evolutionarily conserved mechanisms of

hunting behavior that have been retained in domestic cats despite the process of domestication.

Hissing is an agonistic vocalization in domestic cats that serves as a warning signal in threatening situations and is associated with defensive behavior, fear, and an attempt to increase the distance from a perceived threat [26, 33].

Hissing is an innate, involuntary defensive response. It consists of a voiceless stream of air expelled through the mouth without vocal fold vibration and is triggered by the ventromedial hypothalamus when a cat perceives a threat. According to the 2024 AAFCP Intercat Tension Guidelines, hissing is classified as a self-protective behavior. A hissing cat is attempting to increase its distance from a perceived threat rather than initiate a fight [34].

It is well recognized that when a cat begins to hiss, the safest response is to back away. Hissing is often followed by swatting or scratching if the perceived threat continues to approach. Hissing is a normal feline vocalization indicating that the cat is frightened, highly irritated, or feels threatened. It is typically accompanied by characteristic body language, including an arched back, piloerection (raised fur), flattened ears, and bared teeth [26].

Within the repertoire of normal feline vocalizations, hissing is never associated with a positive emotional state. However, the significance of hissing varies among individual cats. Some easygoing cats hiss only in extreme situations, whereas others with a lower threshold for defensive responses may hiss in reaction to even minor disturbances. For example, one cat may hiss merely upon detecting the scent of a dog in the next room, whereas another may not hiss until the dog has cornered or physically pinned it down. Cats may hiss at other animals, people, and even inanimate objects [34].

Growling is an agonistic vocalization in domestic cats that functions as a warning signal and is typically associated with defensive behavior, aggression, fear, or an attempt to maintain social distance. Unlike hissing, which is a brief defensive response, growling is a longer-lasting, low-frequency vocalization used to communicate a cat's willingness to defend itself, its resources, or its territory and to discourage further approach by a potential threat. Growling is a continuous voiced sound produced in the larynx through the involvement of the vocal folds and generally has a fundamental frequency of approximately 100–225 Hz. It reflects the maintenance of a heightened state of emotional arousal over a period of time and indicates that the perceived threat remains present [16, 26].

If the stimulus is not removed or continues to approach, growling may precede escalation of the conflict and transition to overt aggression, including swatting, biting, or chasing. In most cases, growling is accompanied by characteristic nonverbal signals, such as a tense body posture, fixed gaze, ears directed backward or flattened, increased muscle tension, piloerection (raised fur), and tail movements, all of which indicate a high level of emotional arousal. The primary function of growling is to avoid physical confrontation by warning the opponent of the potential consequences of further approach [34].

Purring is one of the most familiar and pleasant feline sounds, which cats can skillfully use to solicit food from their human caregivers; this response is likely associated with human sensory biases that develop during interactions with companion animals [19, 15]. It is a soothing vibration and humming-like sound produced by cats, particularly during positive interactions such as being stroked in preferred areas of the body. Many people find it rewarding when a cat jumps onto their lap and begins to purr, as this is commonly interpreted as a sign that the cat is relaxed and comfortable. However, purring may convey meanings beyond simple contentment [15].

Cats produce purring through the activation of laryngeal muscles controlled by a unique neural oscillator in the brain, which makes purring an important and versatile means of feline communication [12, 23]. Purring can occur simultaneously with other vocalizations. Dual-channel acoustic measurements have confirmed that the primary mechanism responsible for sound production and vibration is centrally controlled laryngeal modulation of respiratory airflow. The diaphragm and other muscles appear not to be essential for purring, except for their role in maintaining respiration [28].

Kittens begin producing purring sounds at an early age, particularly during nursing, when they suckle milk from their mother. This behavior helps maintain contact with the mother and may serve as a signal of the kitten's condition [17].

Cats may also purr when they want something. This solicitation purr has a somewhat different acoustic quality compared with the typical contentment purr that humans find pleasant. Hunger-related purring often sounds more urgent and includes a higher-frequency component; it may also be accompanied by plaintive meowing. In this way, cats attempt to communicate with humans by producing sounds that are likely to attract attention and elicit a response [11].

Understanding purring provides important information about a cat's emotional state, needs, and social behavior. However, purring alone does not always indicate contentment. In contemporary feline behavioral science, purring is considered a multifunctional vocalization whose meaning depends on the behavioral context, body language, and the specific situation.

Meowing is the most common type of vocalization directed toward humans and is used in a variety of everyday situations to convey emotional states. It may vary in character (e.g., solicitous, inquisitive, or irritated) and may be accompanied by corresponding postures or changes in facial expression [22]. Meowing represents one of the primary forms of communication between cats and humans. This form of communication has gradually developed during the evolutionary transition from the African wildcat to the domestic cats known today. Each cat's meow is somewhat individual and may become adapted to establish a unique communication system between the cat and its owner [19].

Some types of meowing are produced by cats in response to specific species-typical or physiological states, including agonistic interactions, intense emotional arousal, or reproductive behavior in females during estrus. Other types of meowing demonstrate greater variability in acoustic parameters and may acquire a prolonged, melodic quality resembling the intonational patterns of human speech, particularly in

cats that maintain close social contact with humans. Domestic cats are capable of modifying the characteristics of their vocalizations depending on the nature of their interactions with humans and the responses they receive to their communicative signals. The frequency with which meowing is used as a means of communication may increase when this behavior is consistently reinforced by human attention or appropriate responses from the owner. Furthermore, prolonged experience interacting with cats may enhance humans' ability to accurately interpret the animal's emotional state, including the recognition of specific affective states based on the acoustic characteristics of vocalizations [14].

However, not all cats are equally inclined to communicate through meowing. Individual differences in vocal behavior may be influenced by genetic and breed-related factors. Siamese cats, for example, are widely recognized as particularly vocal [2]. At the same time, people who choose this breed often expect a more interactive form of communication and may therefore be more likely to encourage and maintain vocal exchanges with their cats [30].

It is also possible that if a cat predominantly uses vocal signals during interactions with humans, its kittens may be more likely to adopt similar communicative patterns. This may be associated with early social experience, as maternal vocalizations contribute to the development of kittens' auditory perception and may serve as a model for early communicative behavior [30].

The «contentment purr» is associated with positive social interactions and may reflect affiliative relationships between a cat and its owner, as well as between a queen and her kittens. This type of vocalization may also occur when a dominant adult cat approaches a younger cat with affiliative intentions, and vice versa. This familiar and soothing sound functions as a social signal indicating a non-threatening state and supporting affiliative interactions among individuals [16, 30].

Of particular interest is the so-called «solicitation purr», which combines typical purring with high-frequency components resembling the cry of a human infant. Such acoustic features make the signal more effective in attracting human attention and eliciting a rapid behavioral response. It has been suggested that during domestication, cats have evolutionarily adapted certain vocal signals to the characteristics of human auditory perception and social responsiveness [15].

Caterwauling refers to a prolonged, loud, and often harsh feline vocalization that differs from a typical meow in terms of duration, intensity, and acoustic structure. This type of vocalization may serve different communicative functions depending on the context in which it occurs [3].

Caterwauling is most commonly observed during reproductive behavior in intact male and female cats, particularly during periods of sexual activity, when it may facilitate the attraction of potential mates and convey information about the animal's reproductive status. In addition, similar prolonged vocal signals may occur during agonistic interactions between cats, functioning as warning signals, expressions of social tension, or mechanisms for maintaining distance between individuals [16, 30].

Unlike short vocalizations associated with immediate responses to specific stimuli, caterwauling represents a more sustained signal that may reflect a state of heightened emotional arousal, frustration, territorial tension, or social motivation. In domestic cats, the appearance of unusual or frequent caterwauling may also be associated with changes in physical condition, age-associated changes, stress, or discomfort; therefore, it should be evaluated within the context of the animal's overall behavior and health status [2].

The functional meaning of caterwauling cannot be determined solely by the sound itself but depends on accompanying body language, situational context, and individual characteristics of the cat. Accurate interpretation of this vocalization requires consideration of body posture, tail movements, ear position, activity level, and the nature of interactions with other animals or humans [30].

Pain-related vocalization (pain cry) is a vocalization associated with painful experiences that may manifest as sharp cries, prolonged sounds, or other vocal signals of distress [2, 16]. Assessing pain in cats can be challenging because they often conceal signs of discomfort, and vocalization typically occurs in response to intense or acute painful stimuli [27, 16].

A pain cry is a short, intense vocalization characterized by a widely opened mouth, increased muscle tension, and forceful expiration. It is distinguished by high intensity, a harsh acoustic quality, an increased fundamental frequency, and short duration. Such vocalizations usually occur in response to acute painful stimuli, during physical fights between cats, or in situations involving sudden injury [16].

Unlike agonistic vocalizations, such as hissing or growling, which primarily serve a warning function and promote an increase in distance between individuals, a pain cry is an involuntary response to an aversive stimulus and indicates physical distress. It may be accompanied by behavioral changes, including avoidance of contact, defensive postures, reduced activity, body tension, or aggressive responses when the painful area is touched [34].

In her fundamental study of domestic cat vocalizations, Mildred Moelk (1944) described the pain cry as a distinct functional category of vocalization associated with acute negative experiences. However, in modern veterinary practice, pain assessment in cats is based not solely on vocalization but on a comprehensive evaluation of behavioral, physiological, and facial indicators of pain [16].

Conclusions and prospects for further research. Although research on feline vocal communication has expanded in recent years, many aspects of this communication system remain poorly understood. Earlier views often characterized cats as relatively less vocal animals compared with dogs; however, current findings demonstrate that domestic cats possess a diverse and context-dependent vocal repertoire. Further research is therefore required to clarify how cats produce and utilize acoustic signals across different behavioral situations. In particular, the processes involved in the perception and interpretation of vocal signals exchanged between cats remain incompletely understood and represent an important direction for future investigations.

Thus, feline vocal communication represents a complex and multifunctional system that plays an important role in various aspects of cat behavior. Acoustic signals enable cats to interact with other individuals, express emotional states, respond to external stimuli, and regulate social interactions. The diversity of feline vocalizations reflects the high adaptability of their communicative system and demonstrates that cats' capacity for acoustic communication is considerably more complex than previously assumed. Further investigation of feline vocalizations may contribute to a deeper understanding of animal behavior, improve human–cat interactions, and enhance the quality of care provided to domestic cats.

Автор підтверджує відсутність потенційного чи наявного конфлікту інтересів, який міг би вплинути на результати дослідження та публікації

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ГОЛОСОВА КОМУНІКАЦІЯ КОТІВ

Анотація

Кішки - загадкові істоти, але аж ніяк не мовчазні. У них є своя мова, і якщо навчитися її розуміти, можна налагодити довірливий контакт, зміцнити стосунки й навіть «поговорити» з улюбленцем. Кішки використовують голос для вираження емоцій. Нявкання, муркотіння, шипіння, гарчання та багато інших звуків складають котячий «репертуар», і кожен звук має особливе значення залежно від контексту. У статті представлено огляд літератури з питань вокальної комунікації домашніх кішок, особливостей їхнього вокального репертуару, функціонального значення різних типів вокалізацій, а також сучасних підходів до інтерпретації звукових сигналів у контексті поведінки, емоційних станів і добробуту тварин. Вокалізація домашніх кішок є важливим аспектом їхньої комунікативної поведінки. Навколишнє середовище має значний вплив на вокальну поведінку, тому дикі та домашні коти вокалізують по-різному. Вокальний репертуар кішки є широким, і в літературі описано різні типи вокалізацій, які використовуються для привернення уваги, висловлення своїх потреб (голод, біль) або емоцій. Вокалізацію можна ретельно проаналізувати та розкласти на низку дискретних змінних (висота тону, частотна модуляція, гучність та структура). Незважаючи на широке поширення домашніх кішок, особливості їхньої вокальної поведінки вивчені значно менше, ніж у деяких інших домашніх тварин. Сучасні дослідження показують, що характеристики нявкання та інших звуків можуть відображати рівень стресу, потреби тварини, стан здоров'я та особливості взаємовідносин із власником. У той же час, літературні джерела доводять, що вокалізації котів є контекстозалежними комунікативними сигналами, інтерпретація яких потребує комплексного врахування акустичних характеристик, поведінкових проявів і ситуаційного контексту. Вивчення

вокалізації котів має не тільки теоретичне значення для розуміння механізмів комунікації тварин, а й практичну цінність для ветеринарної медицини, етології та підвищення добробуту домашніх тварин. Для дослідження було проведено пошук оригінальних наукових досліджень у міжнародних наукометричних базах даних Scopus і Web of Science, а також у відкритих електронних інформаційних ресурсах мережі Інтернет з метою виявлення та аналізу доказових даних щодо комунікації кішок, поведінкових сигналів, емоційних станів і методів їх оцінки.

Ключові слова: *Felis catus*, вокалізація, поведінка кішки, добробут тварин, комунікація

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Стаття надійшла до редакції 12.07.2026

Стаття пройшла рецензування 09.08.2026

Стаття опублікована 30.09.2026