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The Use of Phytonyms in Figurative Meaning in Karakalpak Folklore

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Abstract: *This article investigates the figurative (non-literal) use of phytonyms — plant-name lexemes — in Karakalpak oral folklore, drawing on the hundred-volume academic edition of Karakalpak Folklore (Qaraqalpaq fol'kloru) published by the "Ilim" Publishing House in Nukus. Four folklore genres are examined comparatively: proverbs and sayings (naqıl-maqallar), heroic epics (dastans), riddles (jumbaqlar), and tongue-twisters (jańıltpashlar). The analysis shows that phytonyms are not distributed evenly across genres, nor do they perform the same function in each. In proverbs, phytonyms function as auxiliary semantic carriers of metaphorical judgment about human character and social life rather than as autonomous images. In epic poetry, the lexeme "gúl" ("flower") accumulates a wide emotional register — beauty, youth, transience, sorrow — frequently activated through contrastive juxtaposition. In riddles, phytonyms are shown to perform two distinct and previously under-differentiated functions: as descriptive vehicles that characterize a hidden referent, and as the hidden referents themselves. In tongue-twisters, the selection of phytonyms is governed primarily by phonetic rather than semantic criteria, serving alliteration and assonance. Comparative attention is also given to the role of cultivated-plant phytonyms (cotton, pumpkin, melon, wheat) as evidence of the historical centrality of agriculture and horticulture in Karakalpak material culture. The findings extend and corroborate the broader Turkic-area scholarship on plant-name lexis (Nematova 1998; Otemisov 2020) by grounding it in a systematic, genre-differentiated folklore corpus, and they offer a model for comparable studies of phytonyms in other folklore traditions of the region.*

Key words: *phytonym, linguistic analysis, lexicon, semantics, extralinguistics, folklore, figurative meaning, proverb, riddle, tongue-twister, epic (dastan)*

1. INTRODUCTION

1.1. The general problem: plant names as more than labels

Every language possesses an inventory of names for the plants that surround its speakers — names for trees, flowers, grains, fruits, weeds, and reeds. At the most basic level, these names, which linguists call phytonyms, perform a purely referential function: they identify a botanical object and distinguish it from others. A name such as qamıs ("reed") tells a listener which plant is being discussed, just as alma ("apple") identifies a particular fruit. If phytonyms did nothing more than this, they would belong entirely to the domain of terminology and lexicography, and their interest to linguists would be largely classificatory.[1]

But plant names rarely stay confined to this referential role for long, especially in languages with a rich oral tradition. Across the literatures and oral cultures of the world, plant names migrate from the field of botany into the field of human experience. A flower comes to stand for a beloved person; a thorn comes to stand for hardship; a withering blossom comes to stand for the passing of youth. This migration — from the literal designation of a plant to the figurative designation of something else, usually something human, emotional, or social — is the central object of the present study. The general problem this article addresses is therefore not "what plants are named in Karakalpak folklore"

but rather "what do these plant names come to mean once folklore puts them to figurative work."[2]

This is a meaningful problem for several interlocking reasons. First, the figurative use of phytonyms is not idiosyncratic or accidental; it is patterned, and the patterns differ by genre. A plant name that operates one way in a proverb may operate quite differently in a riddle or a tongue-twister. Second, the figurative use of phytonyms is a window onto a culture's relationship with its natural and agricultural environment: which plants are chosen for symbolic elaboration, and which meanings are projected onto them, is never random but is shaped by what a community grows, harvests, fears, or cherishes. Third, and most directly relevant to linguistics, the systematic study of phytonyms in figurative use contributes to a broader account of how lexical semantics interacts with extralinguistic — cultural, historical, and ecological — knowledge to produce meaning that exceeds the dictionary definition of a word.[3]

1.2. What is already known: the existing scholarship on phytonym lexis

The linguistic study of plant-name vocabulary (sometimes called phytonymy or phytonymics) has a substantial existing literature in the Turkic-language area, although it remains far smaller than comparable work on, say, zoonyms (animal names) or kinship terminology. Several strands of prior research are directly relevant to the present study.

The first strand concerns the systemic organization of plant-name vocabulary itself — that is, work that treats phytonyms primarily as a lexical-semantic field with its own internal structure (hyperonym–hyponym relations, synonymy, regional variation, borrowing patterns) rather than as a literary device. G. Nematova's dissertation on the system and artistic use of plant-name lexemes in the Uzbek language is foundational in this respect. Nematova observes that phytonym lexemes in their literal sense name specimens of the plant world together with their fruits and products, and that this naming function makes them among the most important resources of artistic literature for designation as such. Crucially for the present study, in artistic literature, plant-name lexemes are also used in figurative and symbolic meanings, where they serve as an important means of metaphorical artistic depiction. This observation supplies the theoretical premise on which the entire present article is built: that phytonyms possess a double semantic life, a literal-denotative one and a figurative-connotative one, and that literary and folkloric texts are precisely the site where the second life becomes visible.[4]

The second strand concerns dictionaries and inventories of plant names — works such as Sahobiddinov's dictionary of useful and harmful plants of Central Asia and their scientific and local names, and Sherbaev's Russian–Latin–Karakalpak dictionary of plant names. These works are indispensable as lexicographic ground truth: they establish, for a given Karakalpak or Uzbek plant name, the corresponding scientific (Latin) taxon and the corresponding Russian equivalent, which allows the researcher to be certain about what plant is being referred to before asking what the name is being made to mean.

The third strand, and the one closest in spirit and scope to the present article, is the historical-linguistic analysis of the Karakalpak phytonymic lexicon as conducted by A. Otemisov in his PhD dissertation and its published autoreferat. Otemisov's work establishes the historical layers of the Karakalpak plant-name vocabulary — distinguishing inherited Turkic strata, borrowings, and innovations — and provides the most complete synchronic-diachronic account of Karakalpak phytonyms as a lexical system to date. However, Otemisov's focus, like that of the broader historical-linguistic tradition he belongs to, is primarily on the lexicon as a system: etymology, word-formation, semantic shift considered as a historical lexicological process. It is not centrally concerned with how this lexicon is deployed, genre by genre, inside the living body of Karakalpak oral folklore.

1.3. The gap: what remains unexamined

Taken together, the existing literature establishes two things very well — the internal structure of the Karakalpak (and more broadly Turkic) plant-name lexicon, and the general principle that plant names can carry figurative, metaphorical, and symbolic meaning in artistic discourse. What it does not yet provide is a systematic, genre-by-genre account of how this figurative potential is actually

realized inside the specific body of Karakalpak oral folklore.

Three gaps in particular motivate the present study.[5]

First, there is no existing study that compares the figurative behavior of phytonyms across the distinct genres of Karakalpak folklore — proverbs, epics, riddles, and tongue-twisters — within a single analytic frame. Prior work tends to either stay at the level of the lexicon as a whole (Otemisov) or to make general claims about figurative literary usage without genre differentiation (Nematova, working primarily with literary rather than folkloric material). Yet folklore genres are not interchangeable containers for the same kind of figurative language; each genre has its own compositional logic — the proverb's compressed didactic judgment, the epic's narrative and emotional arc, the riddle's structure of concealment and revelation, the tongue-twister's phonetic play — and it is reasonable to expect that phytonyms will be recruited differently by each.

Second, even within a single genre, the internal functional differentiation of phytonym use has not been made explicit. This is most visible in the case of riddles. Existing descriptions of riddle phytonyms tend to treat them as a single undifferentiated category — "plant names that appear in riddles" — without separating those phytonyms that describe a hidden referent (where the plant supplies the vehicle of a comparison) from those phytonyms that constitute the hidden referent itself (where the plant is the answer being concealed). These are logically and functionally distinct operations, and conflating them obscures an important regularity in how riddles construct meaning.[6]

Third, the specific lexeme gúl ("flower"), which recurs with striking frequency across Karakalpak epic poetry and proverbial speech, has not been subjected to a focused semantic-range analysis within the folklore corpus, despite being arguably the single most productive Karakalpak phytonym in figurative use. A systematic look at its attested range — beauty, youth, transient happiness, sorrow, the beloved — and at the textual mechanisms (contrast, juxtaposition with other phytonyms, formulaic repetition) by which this range is activated, is still lacking.

1.4. The present study: aim and objectives

The aim of the present study is to identify and systematize the patterns by which phytonyms acquire and deploy figurative meaning across the major genres of Karakalpak folklore, using the hundred-volume academic edition of Karakalpak Folklore as the primary corpus.

To achieve this aim, the study pursues four specific objectives:

1. To determine the semantic function performed by phytonym-components within Karakalpak proverbs and sayings (naqıl-maqallar), with particular attention to whether they operate as autonomous images or as auxiliary carriers of metaphorical meaning.

2. To map the semantic range of the lexeme gúl ("flower") as it is used in Karakalpak heroic epics (dastans), and to characterize the textual devices through which this range is activated.

3. To distinguish and describe the two functional types of phytonym use identified in Karakalpak riddles (jumbaqlar) — the descriptive-vehicle type and the concealed-referent type — and to inventory the phytonyms associated with each, including consideration of the cultivated-plant subset as evidence of the agricultural orientation of Karakalpak material culture.[7]

4. To describe the phonetic-stylistic function of phytonym-components in Karakalpak tongue-twisters (jańıltpashlar), with specific attention to their role in alliteration and assonance.

The remainder of this article proceeds as follows. Section 2 (Methods) describes the corpus, the selection procedure for examples, and the analytic procedures applied to them. Section 3 (Results) presents the findings for each of the four genres in turn, organized according to the four objectives above. Section 4 (Discussion) interprets these findings in relation to the existing literature, proposes an explanatory account of why phytonym function differs by genre, considers the limitations of the present study, and indicates directions for future research.

2. METHODS

2.1. Corpus and materials

The empirical basis of this study is the academic multi-volume edition of Qaraqalpaq fol'klorı ("Karakalpak Folklore"), published in Nukus by the "Ilim" Publishing House, which constitutes the most authoritative and comprehensive published corpus of Karakalpak oral tradition. From this hundred-volume edition, the following components were used as primary sources:

- Volume 4 (1988 edition) — a volume containing proverbs and sayings (naqıl-maqallar), used as a supplementary source of proverbial material alongside Volume 88.

- Volume 88 of the hundred-volume set — the volume specifically dedicated to proverbs and sayings (naqıl-maqallar).

- Volume 97 of the hundred-volume set — the volume specifically dedicated to riddles (jumbaqlar).

- Volumes 88–00 (2015 edition) — a multi-volume block containing, among other material, the riddles examined in Volume 97 and a substantial collection of tongue-twisters (jańıltpashlar), from which page-referenced examples were drawn (pp. 441, 447, 451, 452, 453, 456).

-Volumes 77–87 (2014 edition) — consulted as part of the broader corpus context for proverbial and narrative material.

- The epic (dastan) texts "Edige" and "Alpamıs," together with the epic "Erziywar," all published within the Karakalpak Folklore series, used as the primary sources for the epic-genre analysis (with page references to the "Edige" dastan at pp. 19, 36, and 38, and to the "Alpamıs" dastan at p. 388).[8]

This choice of corpus was deliberate rather than convenient. The hundred-volume edition is organized, in large part, by genre — individual volumes or volume-ranges are dedicated specifically to proverbs, specifically to riddles, and so on — which makes it possible to sample each genre from its own dedicated source rather than relying on mixed anthologies where genre boundaries are blurred. This genre-dedicated organization of the primary source is what makes the comparative, cross-genre design of the present study possible in the first place.

2.2. Sampling procedure

Within each genre-dedicated volume or volume-range, the sampling procedure differed slightly according to the practical constraints of that genre, but followed a common logic: identify every instance in which a recognizable phytonym lexeme occurs, and retain for analysis those instances in which the phytonym's contribution to the text's meaning is not purely literal/denotative.

For proverbs and sayings, Volume 88 and the proverbial material in Volume 4 (1988) were searched specifically for occurrences of the lexeme gúl ("flower"), which prior familiarity with the corpus and with the broader Turkic proverbial tradition identified as the single most productive phytonym in this genre. All proverbs containing gúl were extracted and retained for qualitative analysis; no quantitative frequency count beyond this extraction was attempted, as the study's aim is functional-semantic rather than statistical-distributional.

For epics, the three dastans named above ("Erziywar," "Edige," "Alpamıs") were searched for passages containing the lexeme gúl and its morphological derivatives (e.g., gúl-gúl, gúlim, gúlıń). Passages were selected for inclusion if the phytonym's surrounding context made clear that a meaning beyond the literal botanical one was being activated — for instance, where gúl was applied to a human face, to a state of emotional radiance, or to youth and its passing.

For riddles, Volume 97 (within the 88–100 block) was read in its entirety, and every riddle containing a phytonym — whether as part of the descriptive text of the riddle or as the concealed answer — was extracted. Each extracted riddle was then classified according to which of the two functional roles (described below, Section 2.3) the phytonym occupied.

For tongue-twisters, the relevant pages of the 88–100 volume block (pp. 441, 447, 451, 452, 453,

456) were read, and every tongue-twister containing at least one phytonym lexeme was extracted. Each extracted tongue-twister was then examined for the phonetic device — alliteration or assonance — that the phytonym's presence appeared designed to support.

2.3. Analytic procedures

Four analytic procedures were applied to the sampled material, corresponding to the study's four objectives.

(a) Descriptive (qualitative) characterization. For each extracted example across all four genres, the literal botanical referent of the phytonym was first established (cross-checked, where necessary, against the lexicographic sources of Sahobiddinov and Sherbaev) and then set against the meaning the phytonym appeared to carry in context. This step establishes, for every example, the basic literal/figurative contrast that is the precondition for everything that follows.

(b) Semantic-stylistic analysis. For the proverb and epic material, particular attention was paid to identifying the metaphorical mechanism by which the figurative meaning was produced — for example, whether the phytonym functioned through a relation of resemblance (a flower's beauty mapped onto a person's beauty), through a relation of part-for-whole or whole-for-part, through contrast with a co-occurring image (a blossoming flower set against a withering one), or through formulaic intensification (the reduplicated form gúl-gúl).

(c) Functional-classificatory analysis. For the riddle material specifically, each example was sorted into one of two functional categories based on the relationship between the phytonym and the riddle's hidden answer:

-Type 1 — Descriptive vehicle: the phytonym appears in the riddle's text as a point of comparison that characterizes some other hidden referent (the answer to the riddle is not the plant itself, but something compared to it).

Type 2 — Concealed referent: the phytonym itself constitutes the hidden answer to the riddle (the riddle's descriptive text characterizes the plant, and the plant is what the solver must guess).[9]

Within Type 1, a further distinction was drawn between phytonyms functioning as broad hyperonyms (general category terms such as terek “tree,” tal “willow,” gúl “flower,” aǵash “tree/wood”) and phytonyms functioning as specific hyponyms (named species such as qamıs “reed,” bayterek “great poplar,” qaraǵay “pine”). Within Type 2, the cultivated-plant subset (agricultural and horticultural species such as cotton, pumpkin, melon, wheat, rice, and various vegetables) was separately tabulated, since its size relative to the wild-plant subset was treated as a potential indicator of the corpus's reflection of the community's agricultural lifeways.

(d) Phonetic analysis. For the tongue-twister material, each extracted example was analyzed for the specific consonant or vowel repetition pattern that the phytonym's presence served. Alliteration was identified where a sequence of words sharing an initial or otherwise prominent consonant included the phytonym as one of the alliterating terms; assonance was identified where a sequence of words sharing a prominent vowel (most commonly the low vowel /a/) included the phytonym as one of the assonating terms.

2.4. Scope and replicability note

It should be stated plainly, in the interest of allowing other researchers to replicate or extend this work, that the present study is qualitative and corpus-based rather than corpus-linguistic in the computational sense: no automated concordancing or frequency-statistical software was used, and all extraction was performed by close reading of the named volumes. A researcher wishing to replicate this study would need access to the same hundred-volume edition (or a reprint with stable pagination matching the 2014–2015 “Ilim” printing), and would follow the same volume-by-volume, genre-by-genre extraction logic set out in Section 2.2. The classificatory scheme set out in Section 2.3(c) for riddles — the Type 1 / Type 2 distinction — is offered as a reusable analytic tool that could, in principle, be applied to riddle corpora in other Turkic or non-Turkic folklore traditions.[10]

3. RESULTS

3.1. Phytonyms in proverbs and sayings (naqıl-maqallar)

Examination of the gúl-containing proverbs in Volume 88 and in the 1988 Volume 4 of Karakalpak Folklore yielded the following representative set:

Adam qolı – gúl, mańlay teri – nur (“A person's hand is a flower, the sweat of the brow is light”)

Tikeneksiz gúl bolmas, mashaqatsız baxıt bolmas (“There is no flower without a thorn, no happiness without hardship”)

Gúldiń ósken jerinde bahası joq (“A flower has no value in the place where it grows”)

Tapqan gúl keltiredi, tappaǵan bir baw piyaz (“The one who finds [success] brings a flower; the one who does not, a bundle of onions”)

Across this set, a consistent structural pattern emerges: the phytonym gúl does not stand alone as a self-sufficient image to be admired for its own sake. In each proverb, it is paired — explicitly or implicitly — with a second term against which it is measured or contrasted: hand and sweat, flower and thorn, flower and the place of its growth, flower and onion. The phytonym's contribution to the proverb's meaning is thus inseparable from this pairing structure.

The first analytic finding is that phytonyms in this genre typically do not perform an autonomous image-bearing function; they perform an auxiliary function. That is, the plant name is not deployed because the proverb wishes to make a statement about flowers, but because the proverb wishes to make a statement about something else — value, hardship, reward — and the phytonym supplies a compact, pre-loaded carrier for part of that statement's meaning. In the proverb Tikeneksiz gúl bolmas, mashaqatsız baxıt bolmas, for example, the flower-and-thorn image in the first half is not the proverb's point; it is a structural template that licenses the parallel statement about happiness and hardship in the second half. The phytonym component supplies the form of the argument (a thing of value is inseparable from a cost attached to it) while the lexical pairing in the second clause supplies the content (happiness and hardship).[11]

The second analytic finding concerns what these proverbs are actually about, once the phytonym's auxiliary role is recognized. Despite their superficial subject matter (flowers, thorns, onions), the proverbs as a set are oriented toward evaluative judgments about human character, ethical virtue, and social-economic circumstance. Adam qolı – gúl praises productive human labor by figuring the working hand as a flower. Tapqan gúl keltiredi, tappaǵan bir baw piyaz contrasts success and failure through the differential value of the gifts a successful versus an unsuccessful person is imagined as bringing home — and notably, even the negative term in this contrast (the “bundle of onions”) remains within the phytonym domain, which suggests that the genre's preference for phytonym-based contrast is strong enough to extend even to the unfavorable half of an evaluative pair.

The third finding is at the level of cross-linguistic and cross-cultural generalization. The metaphorical comparisons built on phytonym components in these proverbs are not unique, idiosyncratic inventions; they participate in broadly shared, cross-Turkic patterns of figurative reasoning in which floral imagery stands in a conventional relationship with value, beauty, and the costliness of worthwhile things. This patterning is part of what makes the proverbs immediately interpretable to native speakers without explicit explanation — the metaphorical mapping is, in an important sense, already part of the shared linguistic-cultural competence of the speech community, and the proverb activates rather than invents this mapping.

3.2. The semantic range of gúl (“flower”) in epic poetry (dastans)

The hundred-volume corpus's epic material — drawn here from the “Erziywar,” “Edige,” and “Alpamıs” dastans — shows a substantially wider and more emotionally variegated use of the gúl lexeme than the proverb corpus. Before presenting the figurative data, it is necessary to establish the word's literal semantic structure, since the figurative uses to be discussed below are systematically derived from it.

Literal semantic structure of gúl. The lexeme gúl in Karakalpak carries two related but distinguishable literal senses. In its first sense, gúl names a developmental stage of a plant — specifically, the period that follows budding, i.e., the blooming period itself. In this sense, gúl denotes a part of a whole: it names one organ or phase of the plant, not the plant as such. In its second sense, gúl names a specific taxonomic subgroup of plants distinguished precisely by their blossoms — as in the compound lala gúl ("tulip," literally "tulip-flower"), where gúl functions closer to a classifying suffix-like element than to a free-standing part-term.[12]

Figurative range attested in the epic corpus. Against this literal backdrop, the epic material shows gúl extended along several figurative axes simultaneously, often within a single short passage. The following examples were extracted from the corpus:

Kórgenniń ishin qaynatıp, Júzlerin gúl-gúl jaynatıp ("Making the heart of the beholder boil [with admiration], making her face bloom flower-like") — from the "Erziywar" dastan.

Ashılǵan baǵda gúliń, Baǵda shámen búlbiliń ("Your flower is in the blossoming garden, your nightingale is the candle in the garden") — "Edige" dastan, p. 19.

Toqtamıstıń aldına bardı. Qazan urıp, qızıl gúlim soldı ma... ("He went before Toqtamıs. Striking the kettle [of war], has my red flower withered...") — "Edige" dastan, p. 36.

Ashılǵay da on gúlińnen bir gúliń... ("May even just one of your ten flowers bloom...") — "Edige" dastan, p. 38.

Solmasın bul mıń gúlimnen bir gúlim, Sayramaǵan bul baǵımda búlbilim, Men ne qılayın jalǵanshınıń torına, Usı eken endi meniń táǵdirim ("Let not even one flower of my thousand flowers wither, [though] my nightingale has not sung in this garden of mine — what can I do against the snare of this deceitful world; this, it seems, is now my fate") — "Alpamıs" dastan, p. 388.

From this set, four distinct figurative senses can be distinguished, although they are not always cleanly separable within a single occurrence:

1. Beauty / radiance applied to a human face, as in the reduplicated gúl-gúl jaynatıp ("making [the face] bloom flower-like"), where the flower's visual brightness and the act of blooming are mapped onto a human countenance lit up with feeling or admiration.

2. The beloved person, especially a beloved woman, as in Ashılǵan baǵda gúliń ("your flower in the blossoming garden"), where the flower stands not merely for a quality (beauty) but for the entire person who possesses that quality — a metonymic rather than purely comparative mapping.

3. Youth, vitality, and its potential loss, as in qızıl gúlim soldı ma ("has my red flower withered") and in the proverb-like formula on gúlińnen bir gúliń ("one of your ten flowers"), where the flower stands for a young person (frequently a son or daughter, or more broadly a cherished young life) whose vitality is precarious and subject to withering — that is, to harm, death, or loss.

4. A cherished collective of young lives or hopes, contrasted with adversity, as in the "Alpamıs" passage, where "a thousand flowers" of which "not even one" should wither stands for a multitude of cherished people or hopes set against the silence of the "nightingale" (itself a further figurative term, conventionally associated with joyful song) and against "the snare of this deceitful world."

A structurally important finding, confirmed across all the above examples, is that the figurative force of gúl in epic poetry is very often produced not by the word in isolation but by its placement in a contrastive or correlative pairing. Gúl is paired with búlbil ("nightingale") in two of the five examples, with the act of withering (solw) in two others, and with numerical quantification ("ten," "a thousand," "one") in two others. This recurring strategy — flower set against bird, blooming set against withering, the whole set against the part — allows the epic singer to compress a complex emotional situation (the precariousness of happiness, the contrast between past flourishing and present hardship) into a brief, memorable, and prosodically convenient formula. This is the same general principle of contrastive pairing identified in the proverb material (Section 3.1), but realized at a larger

scale and with a far wider emotional range, befitting the epic genre's narrative and affective scope.[13]

A further finding concerns lexical collocation: the corpus shows gúl co-occurring specifically with qızıl ("red") — qızıl gúlim ("my red flower") — in the "Edige" material. This collocation intensifies the youth/vitality sense identified above (red being conventionally associated, across many languages, with vitality, blood, and life-force) and simultaneously sets up the contrast with withering (a red, vital flower is precisely the kind of flower whose withering is most poignant).

3.3. The two functions of phytonyms in riddles (jumbaqlar)

Volume 97 of the hundred-volume edition, dedicated to riddles, was found to contain phytonyms performing the two distinct functions anticipated in Section 2.3(c): the descriptive-vehicle function (Type 1) and the concealed-referent function (Type 2). The results for each type are presented separately below, followed by a comparative note on the cultivated-plant subset.

3.3.1. Type 1 — Phytonyms as descriptive vehicles

In this type, the riddle's hidden answer is not a plant; rather, a plant (or class of plants) is invoked within the riddle's wording as a point of comparison that helps characterize the true, non-botanical referent. The riddles below illustrate this type, with the concealed answer given in parentheses following each example:

Jumalaq tawda shoq qamıs ("A clump of reeds on a round hill") — Answer: aydar (a forelock / tuft of hair)

Bar eken bayterekte eki asha, Bolmaydı bir shaqası onnan assa, Birewi birewine iykemleser, Qudanıń qúdiretine qıl tamasha ("There were two forks on the great poplar tree; not one twig exceeds [the others] from it; one yields gracefully to the other; behold the wonder of the Creator's power") — Answer: on barmaq (the ten fingers)

Nuw qaraǵay putaqsız, Onı tapshı, Baǵlan taz ("A bare pine without branches — find it, bald youth") — Answer: shash (hair)

Shoqır terek basında, Búkir kempir oynaydı ("On top of a stunted tree, a hunchbacked old woman plays") — Answer: shash, páki (hair, a small knife/razor)

Qara suwda suwat joq, Qalıń talda putaq joq ("In the dark water there is no watering-place; in the dense willow-thicket there is no branch") — Answer: kóz, kirpik (the eye, the eyelash)[14]

The inventory of phytonyms operating in this descriptive-vehicle role across the riddle corpus includes both broad hyperonyms — terek ("tree"), tal ("willow"), gúl ("flower"), aǵash ("tree/wood") — and a substantially longer list of specific hyponyms: qamıs (reed), bayterek (great poplar), qaraǵay (pine), biyday (wheat), asqabaq (pumpkin), qara tal (black willow), salı (rice), aq terek (white poplar), ǵarbız (watermelon), tarı (millet), qabaq (gourd/squash), qawın (melon), juwsan (wormwood), ajırıq (couch grass), paxta (cotton), jıńgıl (tamarisk), jantaq (camelthorn), sheshek (a flowering plant), ádiraspan (wild rue), anar (pomegranate), jeken (a reed/sedge species), geshir (carrot), alma (apple), and sheńgel (a thorny shrub).

The structural logic of this type is consistent across examples: some perceptible feature of the concealed referent — its shape, texture, posture, arrangement, color, or behavior — is mapped onto a feature of the chosen plant that the riddle's intended solver is expected to recognize. A forelock of hair resembles a clump of reeds in its clustered, upright growth; the ten fingers resemble forking branches in their paired, flexible arrangement; an eyelash resembles the absent branch of a dense willow in its fineness and proximity to the water's edge (the eye). The plant, in other words, supplies the vehicle of an implicit comparison whose target is something entirely outside the botanical domain — parts of the human body, in every example given above.

3.3.2. Type 2 — Phytonyms as concealed referents

In this type, by contrast, the phytonym itself is the answer the riddle's solver must guess; the riddle's text describes the plant (often through deliberately oblique or riddling language) without

naming it. Representative examples include:

Sırtı qızıl, ishi aq, Arasında bir tayaq (“Red on the outside, white inside, with a little stick in between”) — Answer: jiyde (the silverberry / Russian olive fruit)

Shól menen qırǵa jarasqan, Adamzatqa qarasqan, Pisirisip awqatın, Hasıl otın dep at alǵan (“Suited to the desert and the steppe, attentive to humankind, [used in] cooking food, named as a valuable fuel-wood”) — Answer: seksewil (saxaul)

Uzın terek, ishi gewek (“A tall tree, hollow inside”) — Answer: qamıs (reed)

Baltırı aq, shashı kók, Islewin bilseń, bolar tósek (“White-stemmed, blue-haired; if you know how to work it, it becomes bedding”) — Answer: jeken (sedge/reed-mat plant)

Tamırı bar, shaqası joq, Qalpaǵı bar, gúli joq, Miywesi bar, dáni joq, Duzlap, quwırıp jeydi, Aytıń, bunı ne deydi? (“It has a root but no branches; it has a cap but no flower; it has fruit but no seed; one salts it and fries it and eats it — tell me, what is this?”) — Answer: zamarrıq (a mushroom/fungus)

Dara-dara, dara bolǵan, Bası ayırılıp, qara bolǵan, Qarıs jerine shash shıǵıp, Ol da ózine pana bolǵan (“Solitary, standing alone; its head split and turned black; hair grows on a span of its ground, and that too became its shelter”) — Answer: gewirek (a wild shrub/grass species)

Ishi qızıl, sırtı jasıl lalazar, Shaqasında búlbúl quslar sayrasar (“Red inside, green outside, a tulip-field; on its branch the nightingale birds sing”) — Answer: qaramıq (poppy)

Beyond the named hyperonyms (aǵash “tree,” miywe “fruit,” terek “tree”) that recur across many Type 2 riddles, this category also includes a long roster of specific plants concealed as answers: shiye (sour cherry), shabdal (peach), tut (mulberry), arsha aǵashı (juniper tree), ǵarbız (watermelon), qawın (melon), geshir (carrot), burısh (pepper), piyaz (onion), qıyar (cucumber), paxta (cotton), asqabaq (pumpkin), kapusta (cabbage), kartoshka (potato), pomidor (tomato), ayǵabaǵar (a melon/gourd variety), tarı (millet), júweri (sorghum/corn — regional usage), mákke (maize), biyday (wheat), salı (rice), maysa shóp (lawn/meadow grass), and sańırawqulaq (mushroom).[15]

3.3.3. The cultivated-plant subset as a reflection of material culture

A specific point of comparison between the two riddle types and within Type 2 in particular concerns the proportion of cultivated (agricultural and horticultural) species relative to wild species among the concealed referents. The Type 2 inventory above is dominated by cultivated plants: fruit trees (sour cherry, peach, mulberry, watermelon, melon, pomegranate by association, apple), vegetables (carrot, pepper, onion, cucumber, cabbage, potato, tomato), and field crops (cotton, millet, sorghum, maize, wheat, rice). Wild or semi-wild species (saxaul, juniper, lawn grass, wild mushroom species) form a visibly smaller subset of the Type 2 inventory.

This distributional pattern — the numerical dominance of cultivated-plant phytonyms among riddle answers concerning vegetation — is read in the present study as a direct lexical-folkloric trace of the centrality of farming and gardening (diyqanshılıq and baǵmanshılıq) in the historical material life of the Karakalpak people. Riddles, as a genre, are typically constructed around objects of everyday familiarity, since a riddle's solvability depends on the solver's prior practical acquaintance with the concealed referent's properties. The predominance of agricultural and horticultural plants among riddle answers is therefore not a neutral fact about word frequency; it is evidence that these plants occupied a central, daily place in the experiential world from which Karakalpak riddle-tellers and riddle-solvers drew their material.

3.4. The phonetic-stylistic function of phytonyms in tongue-twisters (jańıltpashlar)

Tongue-twisters (jańıltpashlar) constitute a distinct genre of oral folklore whose defining property is not semantic but performative: they are built on the repeated occurrence of particular speech sounds, arranged within words and word-sequences in a manner deliberately complicated to articulate. The genre's name in Karakalpak derives directly from this property — jańıltpash is related to the verb stem denoting “to cause [someone] to err/stumble,” reflecting the fact that a speaker

attempting to recite the sequence quickly will typically fail to articulate the complex sound-sequence correctly and will stumble, to the light amusement of listeners.

Analysis of the phytonym-containing tongue-twisters in the corpus (pp. 441, 447, 451, 452, 453, 456 of the 88–100 volume block) shows that phytonyms are recruited into this genre actively and specifically for their phonetic properties, organized around two principal devices: alliteration and assonance.

3.4.1. Alliteration

Alliteration — the repetition of a shared consonant sound across adjacent or proximate words — is illustrated by the following examples:

Bir tuttıń tamırın, Túrp túrtip turma, Túrptiń tamırın, Tut túrtip turma (“Do not poke the root of a mulberry tree's root, [and likewise] do not poke the root of a radish”) — p. 453.

Qara da qırdıń basında, Qartań bir qarabaraq, Qartań qarabaraqtı, Qars-qurs shabaplar (“On top of the dark ridge, an old qarabaraq [a plant/bird name]; they go chop-chop at the old qarabaraq”) — p. 447.

In both examples, the phytonyms tut (“mulberry”) and qarabaraq were evidently selected for inclusion not because the tongue-twister has any particular communicative interest in mulberries or in this particular plant as such, but because these lexemes are phonetically consonant with the surrounding vocabulary. In the first example, the consonant cluster /t/ (appearing in tuttıń, tamırın, túrp, túrtip, turma, tut) is repeated with high density, producing what may be classified as a near-total alliterative chain; the phytonym tut is integrated as one link in this chain rather than standing apart from it. In the second example, the velar/uvular stops /q/ recur densely (Qara, qırdıń, Qartań, qarabaraq, Qars-qurs), again with the phytonym serving as a structural link in the consonantal chain rather than as a semantically privileged item.

The function this alliterative patterning serves within the tongue-twister genre is twofold: it supports the text's musicality (its rhythmic, sound-patterned quality, which makes it memorable and pleasurable to recite even independent of meaning), and it directly supports the genre's performative difficulty — the very density of shared consonants across adjacent words is what makes rapid, accurate articulation difficult, which is, after all, the tongue-twister's entire reason for existing.

3.4.2. Assonance

Assonance — the repetition of a shared vowel sound across a line or sequence of words — is illustrated by the following examples:

Áliyma almanı, Amanǵa attı (“Aliyma threw the apple at Aman”) — p. 453.

Almanı alıp ektim, Erikti terip ektim (“I planted [it] having taken the apple; I planted [it] having picked the apricot”) — p. 456.

Dáryanıń arjaǵında bir jambılsha, Ber jaǵında bir jambılsha, Senıń alǵan jambılshań mılja-mılja (“On the far side of the river, a small jambıl [plant/bundle]; on this side too, a small jambıl; the jambıl you took is all loose/scraggly”) — p. 451.

Men apama salı aqlattım, Apam maǵan salı aqlattı (“I had my mother husk the rice [for me]; my mother had me husk the rice [for her]”) — p. 452.

Nur qarabay tawınan kiyatır edim, Aldımnan shıqtı eki mıń eki júz eki túp jiyde, Jiydelengen eki mıń eki júz eki túp jiyde me? Jiydelenbegen eki mıń eki júz eki túp jiyde me...? (“I was coming from Nur Qarabay mountain; before me appeared two thousand two hundred and two silverberry bushes — were they two thousand two hundred and two silverberry bushes bearing fruit, or two thousand two hundred and two not bearing fruit?”) — p. 441.

Across these five examples, the low central vowel /a/ recurs with conspicuous density — in the first two examples it appears in nearly every word of the line (Áliyma, almanı, Amanǵa, attı; Almanı, alıp, ektim, Erikti, terip, ektim), and in the remaining three examples it recurs prominently though not

in literally every word, alongside other vowels. The phytonyms alma (“apple”), erik (“apricot”), jambılsha (a diminutive plant/bundle term), salı (“rice”), and jiyde (“silverberry”) are each integrated into their respective lines as carriers of this dominant vowel, in the same structural role that the consonant-bearing phytonyms played in the alliteration examples above. As with alliteration, the functional payoff of this dense vowel-repetition is to heighten the line's tonal and rhythmic quality, increasing both its memorability and the specific articulatory difficulty that defines the genre.

3.4.3. The phytonym-selection criterion in tongue-twisters: phonetic, not semantic

A finding that follows directly from Sections 3.4.1 and 3.4.2, and that distinguishes this genre sharply from the other three examined in this study, is that the selection criterion governing which phytonym appears in a given tongue-twister is overwhelmingly phonetic rather than semantic. In the proverb, epic, and riddle genres (Sections 3.1–3.3), the phytonym is chosen because of some semantic property it possesses — its conventional association with beauty, value, hardship, youth, or some perceptible physical resemblance to the riddle's hidden referent. In the tongue-twister genre, by contrast, the phytonym appears to be chosen primarily because its phonetic shape (its consonant or vowel inventory) fits the sound-pattern the line is being constructed to produce; semantic content, while of course still present (a tongue-twister about apples is still, minimally, “about” apples), is subordinated to phonetic design.

4. DISCUSSION

4.1. Principal finding, stated concisely

The principal finding of this study is that the figurative use of phytonyms in Karakalpak folklore is not uniform across genres but is systematically differentiated according to each genre's own compositional logic. Proverbs recruit phytonyms as auxiliary carriers of evaluative, ethically and socially oriented metaphor; epics recruit the single lexeme gúl as an unusually productive site for a wide emotional register built on contrastive pairing; riddles split phytonym use into two clearly distinguishable functions — descriptive vehicle and concealed referent — with the latter further stratified by the cultivated/wild distinction; and tongue-twisters recruit phytonyms primarily for their phonetic rather than semantic properties. No single account of “what phytonyms mean in Karakalpak folklore” could capture this differentiation; the genre, not the lexeme alone, is the relevant unit of explanation.

4.2. Relation to existing scholarship

This differentiated picture both confirms and extends the foundational claim in the existing literature that phytonyms carry a double semantic life — literal and figurative — in artistic and folkloric discourse. Nematova's general observation that plant-name lexemes serve as an important means of metaphorical artistic depiction in their figurative uses is fully borne out by the present findings: every genre examined here shows phytonyms doing exactly this kind of metaphorical work, even though the specific shape of that work differs by genre. The present study's contribution, relative to this existing claim, is to show that the general principle of figurative phytonym use, when examined closely within a single folklore tradition, resolves into several distinct sub-principles, each tied to a particular genre's structural requirements.

The present findings also extend Otemisov's lexical-historical account of the Karakalpak phytonymic system in a complementary direction. Where Otemisov's dissertation establishes the historical strata and etymological composition of the Karakalpak plant-name lexicon as a system, the present study shows how a substantial subset of that same lexicon is activated — selectively, and according to genre-specific principles — in the living performance contexts of oral folklore. The two lines of inquiry are not competing but cumulative: a full account of the Karakalpak phytonymic lexicon requires both the historical-systemic perspective that Otemisov supplies and the functional-folkloric perspective that the present study attempts to supply.

4.3. Explanatory mechanisms: why does function differ by genre?

It is worth pausing to ask why the four genres examined here should differ from one another in

the way the results show they do, rather than simply cataloguing the difference. Three (in fact four) explanatory mechanisms suggest themselves, each grounded in a structural property of the genre in question.

The compression mechanism (proverbs). Proverbs are, by definition, maximally compressed units of traditional wisdom; their entire communicative efficiency depends on packing a generalizable judgment into the smallest possible linguistic space, typically a single short sentence or a pair of parallel clauses. A phytonym is an efficient tool for this compression precisely because it arrives pre-loaded with culturally shared connotations (a flower already means something like "beautiful, valuable, but fragile" to any competent speaker before the proverb even begins), allowing the proverb to invoke a complex evaluative stance without having to spell it out. This is why phytonyms in proverbs function auxiliary to, rather than as, the proverb's point: the proverb's point is the evaluative judgment (about labor, about hardship, about reward), and the phytonym is the compression device that lets the judgment be stated briefly.

The narrative-affective mechanism (epics). Epic poetry, unlike the proverb, has narrative scope and emotional duration: a single dastan unfolds across many lines and tracks a hero's or heroine's changing fortunes over time. A single phytonym like gúl, precisely because of its inherent capacity for contrastive elaboration (blooming versus withering, the part versus the whole, the one versus the many), becomes a flexible recurring motif that the epic singer can return to at different narrative moments to mark shifts in fortune — joy, then threat, then loss, then renewed hope. The same lexeme's literal life-cycle structure (a flower buds, blooms, and eventually withers) supplies a ready-made temporal scaffold onto which the hero's emotional and narrative trajectory can be mapped. This explains why gúl in particular, among all Karakalpak phytonyms, achieves such outsized figurative productivity in the epic genre specifically: its literal referent already has a built-in beginning-middle-end structure that mirrors narrative time.

The cognitive-puzzle mechanism (riddles). Riddles are built on a structure of deliberate concealment followed by solver-driven revelation, and this structure has two possible directions: concealing a non-botanical thing behind a botanical vehicle (Type 1), or concealing a botanical thing behind a deliberately oblique, riddling description (Type 2). Both directions serve the riddle's cognitive-puzzle function, but they draw on different resources: Type 1 draws on the solver's capacity to recognize cross-domain physical resemblance (hair looks like a reed-clump), while Type 2 draws on the solver's practical, everyday familiarity with the concealed plant's properties (knowing that a particular fruit is red outside, white inside, with a "stick" — actually a seed — in the middle). The heavy representation of cultivated plants in Type 2 follows directly from this: the riddle genre depends on shared practical knowledge between riddle-poser and riddle-solver, and cultivated plants — grown, harvested, and prepared by the community itself — are exactly the plants about which such shared practical knowledge is most reliably available.

The phonetic-performance mechanism (tongue-twisters). Tongue-twisters, finally, are oriented not toward meaning-compression, narrative elaboration, or cognitive puzzle-solving, but toward the sheer performative challenge of rapid, accurate articulation. Because this genre's success criterion is phonetic difficulty rather than semantic content, the selection of any given lexeme — including phytonyms — is governed by sound-shape fit rather than by metaphorical aptness. This is precisely why the phytonyms appearing in this genre (mulberry, apple, apricot, rice, silverberry) show no particular thematic coherence with one another or with any larger symbolic program, in contrast to the thematically coherent floral imagery of the epic genre: their unifying feature is not what they mean, but how they sound.

4.4. The special productivity of gúl: a closer look

The epic-genre findings (Section 3.2) raise a question worth addressing directly: why does gúl specifically, among all the phytonyms available in the Karakalpak lexicon, achieve such disproportionate figurative productivity, appearing not only in epics but also, as Section 3.1 showed, as the single most extractable phytonym in the proverb corpus?

Part of the answer lies in the literal semantic structure described in Section 3.2: gúl's literal meaning already encodes a temporal and evaluative structure (a stage of peak beauty and value, following a period of latency/budding, and preceding a period of decline/withering) that maps with unusual ease onto human experiences of beauty, youth, love, and mortality — experiences that are, of course, central preoccupations of both proverbial wisdom and epic narrative. A phytonym whose literal referent already has this kind of built-in evaluative arc requires less figurative "work" to extend into the human domain than a phytonym without such an arc (compare, for instance, the riddle-genre phytonyms like qamıs "reed" or terek "tree," which are exploited in Section 3.3 primarily for their static physical shape, not for any inherent life-cycle structure).

A second part of the answer is almost certainly prosodic and formulaic: the short, phonologically simple shape of gúl (a single closed syllable) makes it unusually easy to integrate into the metrical and rhyme patterns of both proverbial and epic verse, and its capacity for reduplication (gúl-gúl) and for combination with possessive suffixes (gúlim, gúliń) gives it additional formulaic flexibility that bulkier phytonyms lack.

4.5. Implications for the study of extralinguistic (cultural) knowledge in folklore

The cultivated-plant findings in Section 3.3.3 carry a methodological implication beyond the immediate scope of riddle analysis: they illustrate how a careful linguistic inventory — in this case, simply tallying which plants are concealed as riddle answers — can function as indirect ethnographic evidence about a community's material life, without requiring separate ethnographic fieldwork. This is, in a modest way, an illustration of the broader principle, foregrounded in the keywords of this study, that extralinguistic knowledge (about agriculture, climate, daily practice) is not external to linguistic analysis but is recoverable from careful linguistic analysis, when the analysis is sensitive to genre-internal structure (here, the systematic preference for familiar, practically-known referents in the riddle genre).

Conclusion.

Several limitations of the present study should be acknowledged directly. First, the analysis is qualitative and example-based rather than quantitative; no claim is made about the precise statistical frequency of figurative versus literal phytonym use in any genre, only about the types of figurative use attested and their apparent functional logic. A future corpus-linguistic study employing systematic concordancing across the full hundred-volume edition could test whether the patterns identified here hold at scale and could supply frequency data currently absent. Second, the epic-genre analysis in this study concentrates heavily on the single lexeme gúl; while this concentration is justified by gúl's evident productivity (Section 4.4), it leaves open the question of how other phytonyms behave within the epic genre specifically, a question the present study's design does not directly answer. Third, the riddle-genre Type 1/Type 2 classification, while analytically useful, was applied through close reading rather than through inter-rater reliability testing with multiple independent coders; a study with greater methodological resources could strengthen confidence in this classification through such testing. Fourth, the present study is confined to a single folklore tradition (Karakalpak) and does not attempt systematic comparison with neighboring Turkic or Central Asian folklore traditions, although such comparison would be a natural and valuable extension.

4.7. Directions for future research

Building directly on the limitations noted above, several directions for future research follow naturally from this study's findings. A comparative study extending the same genre-differentiated framework to other phytonyms beyond gúl within the epic corpus — for instance, tracking the figurative behavior of terek ("tree"), bayterek ("great poplar," a lexeme with strong cosmological associations in broader Turkic mythology), or jeken (reed/sedge) across the full epic corpus — would test whether the contrastive-pairing and life-cycle-mapping mechanisms identified here for gúl generalize to other phytonyms or are specific to this one lexeme. A cross-genre frequency study, using systematic digital concordancing of the full hundred-volume edition, would supply the quantitative dimension the present qualitative study lacks and would allow testing whether the genre-based

functional differentiation proposed here (Section 4.3) holds up at the level of corpus-wide statistical distribution rather than illustrative example. Finally, a comparative study placing the Karakalpak findings alongside equivalent genre-differentiated analyses of phytonym use in neighboring Turkic folklore traditions (Uzbek, Kazakh, Kyrgyz, Turkmen) would help determine which of the patterns identified here are specifically Karakalpak and which reflect broader shared Turkic folkloric inheritance — a question the present single-tradition study is not positioned to answer on its own, but to which it can supply a clear, replicable point of comparison.

4.8. Concluding statement

Taken as a whole, this study demonstrates that the figurative life of phytonyms in Karakalpak folklore is rich, genre-sensitive, and systematically patterned rather than incidental. Proverbs press plant names into the service of compressed ethical and social judgment; epics, especially through the lexeme gúl, build an extended emotional vocabulary out of the literal life-cycle of a flower; riddles split phytonym use between the work of describing and the work of being described, with the latter function disproportionately populated by the cultivated plants of Karakalpak agricultural life; and tongue-twisters subordinate phytonym meaning almost entirely to phonetic design. Read together, these four genre-specific pictures compose a single, coherent account of how a community's oral tradition takes the names of the plants around it and puts them to work saying something other, and something more, than botany.

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