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SCHIZOTHORAX HECKEL, 1838 (TELEOSTEI: CYPRINIDAE) URUG'INING QISQACHA O'RGANILISH TARIXI VA HOZIRGI SISTEMATIK HOLATI**КРАТКАЯ ИСТОРИЯ ИССЛЕДОВАНИЯ И СОВРЕМЕННЫЙ СИСТЕМАТИЧЕСКИЙ СТАТУС РОДА SCHIZOTHORAX HECKEL, 1838 (TELEOSTEI: CYPRINIDAE)****A BRIEF RESEARCH HISTORY AND CURRENT SYSTEMATIC STATUS OF THE GENUS SCHIZOTHORAX HECKEL, 1838 (TELEOSTEI: CYPRINIDAE)****Gafurova Ominaxon Maxammadzikirovna¹** ¹Farg'ona davlat universiteti zoologiya ixtisosligi tayanch doktoranti**Xalimov Sharofiddin Axadjon o'g'li²** ²Farg'ona davlat universiteti biologiya mutaxassisligi magistranti**Sheraliyev Baxtiyor Maxmutali o'g'li³** ³Farg'ona davlat universiteti dotsenti, b.f.f.d. (PhD)**Annotatsiya**

Schizothorax urug'i Osiyo qit'asining tog' daryolarida tarqalgan baliqlar guruhiga mansub bo'lib, murakkab taksonomik rivojlanish tarixi bilan boshqa karpsimonlardan ajralib turadi. Ushbu maqolada *Schizothorax* urug'i vakillarining tadqiq etilish tarixi xronologik tartibda tahlil qilinadi. 1832–2022-yillar davomida ushbu urug' tarkibida 100 dan ortiq tur va kenja tur tavsiflangan, biroq, vaqt o'tishi bilan ularning aksariyatining sistematik maqomi o'zgargan. Hozirgi kunda bu taksonlardan 59 tasi haqiqiy (valid) deb hisoblanadi. Maqolada shuningdek, *Schizothorax* urug'ining hozirgi sistematik holati tahlil qilinib, 70 ta tur mavjudligi qayd etilgan. Shuningdek, murakkab taksonomik holatga ega bo'lgan turlarni tadqiq etish bo'yicha ustuvor yo'nalishlar ham yoritilgan.

Аннотация

Род *Schizothorax* представляет собой группу рыб, распространённых в горных реках Азии, и отличается от других карпообразных сложной историей таксономического развития. В данной статье хронологически проанализирована история изучения представителей рода *Schizothorax*. В период с 1832 по 2022 годы в составе этого рода было описано более 100 видов и подвидов, однако со временем таксономический статус большинства из них изменился. В настоящее время 59 из этих таксонов считаются валидными. Кроме того, в статье проведён анализ современной систематической ситуации рода *Schizothorax*, в рамках которого отмечено наличие 70 видов. Также освещены приоритетные направления исследований таксонов со сложным таксономическим статусом.

Abstract

The genus *Schizothorax* represents a group of fish distributed in the mountain rivers of Asia and is distinguished from other cypriniforms by its complex taxonomic history. This article provides a chronological analysis of the research history of *Schizothorax* species. Between 1832 and 2022, more than 100 species and subspecies were described within this genus; however, over time, the taxonomic status of most of them has changed. At present, 59 of these taxa are considered valid. Furthermore, the article analyzes the current systematic status of the genus *Schizothorax*, noting the presence of 70 species. It also highlights priority research directions for taxa with complex taxonomic status.

Kalit so'zlar: chuchuk suv baliqlari, taksonomiya, karpsimon baliqlar, turlarni tavsiflash, *Schizothorax*, sinonimlik.

Ключевые слова: пресноводные рыбы, таксономия, карпообразные рыбы, описание видов, *Schizothorax*, синонимия.

Keywords: freshwater fish, taxonomy, cypriniform fish, species description, *Schizothorax*, synonymy.

KIRISH

Ilmiy asosdagi taksonomik tadqiqotlar K.Linneyning "Tabiat sistemasi" (1758) asari davridan boshlangan va dastlabki davrda bu sohadagi ishlarning asosiy qismini tabiatdan yig'ilgan namunalarni taksonomik mezonlar asosida baholash tashkil etgan [1]. Biroq, oradan 270 yilga yaqin vaqt o'tgach, har bir katta va kichik taksonlarni o'rganish tarixi shakllandi. Bu esa taksonlar kesimidagi tadqiqotlarda ularning o'rganilish tarixini alohida tadqiq etishni taqozo qiladi. Bu esa taksonomik jihatdan murakkab tarixga ega bo'lgan taksonlarning sistematik o'rni oydinlashtirishda juda muhim hisoblanadi [2].

Markaziy Osiyo suv havzalarida tarqalgan eng murakkab taksonomik tarixga ega bo'lgan turlar *Triplophysa* hamda *Schizothorax* urug'lariga mansubdir. Markaziy Osiyo suv havzasidan tavsiflangan bir qancha *Triplophysa* turlari – *T. elegans*, *T. uranoscopus*, *T. dorsonatata*, *T. tenuis* kabilar uzoq muddat *Triplophysa stolickai* ning sinonimi sifatida ko'rib kelingan [3]. Shu bilan birga, ushbu suv havzalaridan kashf etilgan 15 ga yaqin *Schizothorax* urug'iga mansub tur va kenja turlari ham *Schizothorax intermedius* ning sinonimi sifatida malakalangan [4]. Biroq, so'nggi yillarda olib borilgan qator taksonomik va molekulyar tadqiqotlar natijasida mazkur turlarning aksariyati mustaqil valid tur ekanligi oydinlashmoqda (Sheraliev & Peng, 2021) [3].

Mazkur maqolada *Schizothorax* urug'ini tadqiq etish bo'yicha tadqiqotlarni eng dastlabki yillardan boshlab tahlil qilish hamda shu asosida urug'ning bugungi kundagi sistematik holatini oydinlashtirish maqsad qilib olingan.

MATERIAL VA METODIKA

Schizothorax urug'i vakillarining taksonomik holati, ularni tadqiq etishning xronologik bosqichlari hamda taksonlarning vaqt o'tishi bilan o'z sistematik o'rni o'zgarib borishi Eschmeyer xalqaro baliqlar katalogi (Eschmeyer's Catalog of Fishes) asosida olib borildi.

NATIJALAR VA MUHOKAMA

J.Heckel (1838) Kashmir vodiysidagi suv havzalaridan Karl Freiherrn von Hügel tomonidan yig'ilgan baliq namunalarini o'rganish jarayonida *Schizothorax* urug'ini ilk marotaba tavsifladi hamda ushbu tadqiqot davomida urug'ning dastlabki 10 turi (*S. curvifrons*, *S. esocinus*, *S. huegelii*, *S. longipinnis*, *S. micropogon*, *S. nasus*, *S. niger*, *S. plagiopterus*, *S. planifrons*, *S. sinuatus*)ni kashf etdi [5]. Ushbu urug'ning tipik turi (*type species*) McClelland (1842) tomonidan *S. esocinus* deb belgilandi [6]. Shuningdek, J.McClelland va W.Griffith (1842) tomonidan Afg'onistonning (Janubiy-G'arbiy Osiyo) Qobul daryosidan *S. barbatus*, *S. edeniana*, Tarnuk va Qobul daryolaridan *S. intermedius* hamda Helmand daryosidan *S. ritchieana* turlari ilk bor tavsifladi [6].

XIX asrning so'nggi choragida *Schizothorax* urug'iga mansub yangi turlarning tavsiflanish ko'rsatkichi ortib bordi. Masalan, Osiyo mamlakatlari suv havzalarini tadqiq etgan Karl Kessler Shah-rud daryosi (Eron)dan *S. pelzami*, Zarafshon daryosi (O'zbekiston)dan *S. fedtschenkoi*, *S. minutus*, *S. euryostomus*, *S. affinis* turi va *S. euryostomus anisolepida* kenja turi, Olako'l ko'liga quyiluvchi Urjar daryosi (Qozog'iston)dan *S. argentatus*, Ala-Tau tizmasidagi ko'ldan *S. orientalis*, Xitoy suv havzalaridan *S. aksaiensis*, *S. tarimi*, *S. lacustris* va *S. microlepidotus* kabi turlarni tavsifladi [1, 7, 8, 9]. Albert Günther unga Kashgar va Yarkand daryolaridan (Xitoy) yetkazilgan *Schizothorax* sp. namunalarining (n=2) dorsal suzgich qanotida 10 ta, anal suzgich qanotida 7 ta nurlari borligi, mo'ylovlari ko'z diametridan kattaligi, anal suzgichining uchi dum suzgichining asosiga yetib bormasligi, tanasining eng baland qismi boshining uzunligiga teng va standart uzunlikning 1/5 qismiga to'g'ri kelishi, interorbital sohasi keng va biroz do'ngligi bilan boshqa *Schizothorax* turlaridan farqlanishini hisobga olib uni *S. biddulphi* deb qayd etdi [10]. Keyinroq, Hari-Rud daryosidan (Afg'oniston) *S. raulinsii* ni tavsifladi [11].

Shu bilan birga, Londondagi Tabiat tarixi muzeyiga Xitoyning Yarkand viloyatidan olib kelingan namunalar asosida F.Day (1877) *Schizothorax* urug'ining bundan oldin tavsiflanmagan 3 turi – *S. punctatus*, *S. microcephalus*, *S. irregularis* larni morfobiologik ko'rsatkichlari, organlarining tanada joylashuvi hamda tana rangiga qarab tavsiflagan [12]. Xususan, Kashmir ko'lidan *S. punctatus*, hozirgi Pokistonning Panjah hududidan *S. microcephalus*, hozirgi Afg'onistonning Toshqo'rg'on hududidan *S. irregularis* lar dorsal suzgich qanotidagi shoxlanmagan nurining zaif yoki kuchliligi, dorsal, ko'krak hamda dum suzgich qanotlaridagi nurlar miqdori va yon chizig'idagi tangachalar soni bilan farqlari kuzatilgan [12].

A.Nikolskiy (1886, 1903) Qozog'istonning sharqidagi Balxash ko'liga quyiluvchi Ili daryosidan *Schizothorax kolpakowskii* ni, Xitoyning Tibet platosidan *Schizothorax kozlovi* turlarini tavsifladi [13, 14].

XIX asr oxirlarida hozirgi Xitoyning shimoliy mintaqalari, Mo'g'uliston hududlari va Markaziy Osiyo suv havzalaridan Rossiya Fanlar akademiyasi Zoologiya institutiga olib kelingan baliq namunalari asosida S.Herzenstein *Schizothorax* urug'ining 10 ga yaqin tur va kenja turlari (*S. sinensis*, *S. dayi*, *S. kessleri*, *S. altior*, *S. dolichonema*, *S. potanini*, *S. regelii*, *S. intermedius malacorrhynchus*, *S. argentatus pseudoaksaiensis*)ning ilk bor tavsifini keltirdi [15].

XX asrning boshlarida Ch.Regan (1905-1907) Londondagi Tabiat tarixi muzeyiga Tibetning Lhasa daryosi havzasi hamda Xitoyning janubiy-g'arbiy Yunnan provinsiyasi suv havzasidan keltirilgan baliq namunalari morfologik va sistematik tadqiq etib, *Schizothorax* urug'iga mansub 4 tur (*S. dipogon*, *S. waltoni*, *S. macropogon*, *S. taliensis*)ni tana qismlarining standart uzunlikka nisbatan foiz ko'rsatkichlari, suzgich qanotlaridagi nurlar va yon chizig'idagi tangachalar soni hamda teri rangigiga qarab tavsifladi [16, 17].

Markaziy Osiyo hududi deyarli yopiq hudud bo'lganligi, ya'ni hech qanday okean va dengizlar bilan tutashmaganligi bois, bu mintaqadagi bioxilma-xillik ilmiy tadqiqotchilarni qiziqtirib kelgan. XX asr boshlarida L.Berg (1907) Qirg'izistondagi Issiqko'l havzasidan *S. pseudoaksaiensis issykkuli* kenja turini tavsiflaydi [18]. Mazkur kenja tur K.Kessler (1872) tomonidan aniqlangan *S. aksaiensis* dan tanasining shakli, boshining kattaligi va og'iz tuzilishi kabi morfologik belgilari bilan farq qilgan [18]. Keyinchalik, L.Berg (1932) aynan Qirg'iziston hududida joylashgan Sarichelak ko'lidan *S. intermedius eurycephalus* kenja turini qayd etadi [19].

R.Lloyd (1908) Londondagi Tabiat tarixi muzeyiga Tibetning Gyantze daryosidan yuborilgan baliq turlarini o'rganib, *Schizothorax* ning yangi turini tavsifladi. Yangi tur – *S. oconnori* avvalroq kashf etilgan *Schizothorax* urug'i turlaridan bir qancha morfologik belgilari, jumladan, bosh uzunligining standart uzunlikning 1/5 qismini tashkil etishi, tanasining eng baland qismi bosh uzunligidan biroz kattaligi, yon chizig'i bo'ylab 105 tadan 110 tagacha tangachalar joylashganligi bilan farq qilgan [20].

E.Zugmayer (1909) Tibetning Pangong ko'li va Leh yaqinidagi Hind daryosidan Myunxendagi Davlat Zoologiya muzeyiga olib kelgan baliq namunalari orasidan *Schizothorax* urug'iga mansub 3 yangi turni, mos ravishda *S. tibetanus*, *S. ladacensis* va *S. montanus* larni tavsifladi [21]. Xuddi shunday, D.Vinciguerra (1916) ham Genova tabiat tarixi muzeyiga Hind daryosidan yuborilgan baliq namunalari orasidan *Schizothorax* urug'iga mansub bo'lgan, avvalgi aniqlangan turlardan yetarlicha morfologik belgilari bilan farq qiluvchi *Schizothorax dainellii* ni kashf etdi [22].

J.Norman (1923) Londondagi Tabiat tarixi muzeyida saqlanayotgan baliq namunalari orasidan Tibetning Irravadi daryosi uchun avval qayd etilmagan *Schizothorax yunnanensis* ni tana balandligining bosh uzunligiga tengligi, pastki labi burmalarsiz bo'lishi, yon chizig'ida 102 tagacha tangachalar bo'lishi, tanasining pastki qismi kulrang va oqish rangdaligi kabi belgilari bilan ilk bor tavsiflab berdi [23].

Shuningdek, oldingi Turkistonning Tyan-Shan tizmalari daryolaridan ham yangi baliq turlari qayd etildi. Jumladan, K.Lohberger (1929) Ili daryosidan yig'ilgan baliq namunalari morfologik belgilari, meristik ko'rsatkichlari, tana tuzilishini o'rganib, *Schizothorax stummeri* ni birinchi marotaba tavsifladi [24].

J.Pellegrin (1931) Xitoy suv havzalaridan *Schizothorax griseus* va *S. multipunctatus* ni tavsiflaydi [25]. Xitoyning Guijou provinsiyasi atrofidan aniqlangan ushbu ikki tur bir-biridan yon chizig'idagi tangachalar soni (mos ravishda 95-100 vs. 70-77), ko'rak suzgich qanotidagi umumiy nurlar miqdori (20 vs. 16) hamda tanasining har xil rangdaligi (kulrang-jigarrang vs. sarg'ish) kabi belgilari bilan farq qilishi keltirilgan [25].

V.Pietschmann (1931) hozirgi Turkiyaning Egirdir ko'lidan Vena Tabiat tarixi muzeyiga olib kelgan namunalar ichidan *Schizothorax prophylax* baliq turini qayd etdi [26].

F.Turdakov Markaziy Osiyo suv havzalaridan *Schizothorax* urug'iga mansub bir qancha tur va kenja turlarni qayd etadi. Xususan, hozirgi O'zbekistondan *S. intermedius niger* (Zarafshon daryosi), *S. intermedius kessleri* (Surxondaryo daryosi) hamda *S. intermedius angreni* (Ohangaron daryosi) kabi kenja turlarni tavsiflab berdi [27, 28]. Shu bilan birga, hozirgi Qirg'izistonning Talas

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havzasidan *S. saltans* hamda *S. intermedius talassi* tur va kenja turlarni qayd etdi [29]. Bundan tashqari, N.Nekrashevich (1948) hozirgi Qirg'izistonning Alako'l havzasidan *Schizothorax victorians* turini kashf etdi [30].

H.Fowler hamda H.Steinitz (1956) Shimoliy Eron hududiga Afg'onistondan kirib keluvchi Helmand havzasining quyi oqimlaridan boshlanuvchi Siston daryosidan *Schizothorax schumacheri* turini qayd etdi [31].

XX asrning uchinchi choragida Xitoy suv havzalari bo'ylab Schizothoracinae kenja oilasi baliqlari kengroq tadqiq etila boshladi. Xususan, W.Tsao (1964) Yunnan provinsiyasi suv havzalaridan *Schizothorax* urug'iga mansub 10 ga yaqin tur va kenja turlar (*S. gongshanensis*, *S. lantsangensis*, *S. lissolabatus*, *S. myzostomus*, *S. nukiangensis*, *S. parvus*, *S. yunnanensis paoshanensis*, *S. molesworthi meridionalis*)ni tavsifladi [32].

M.Karaman (1969) Eron suv havzalarida tarqalgan *Schizothorax* urug'i vakillarini tadqiq etdi. Izlanishlari mobaynida ushbu hudud uchun *S. pelzami iranica* kenja turini qayd etdi [33].

Karpsimonlar turkumining taksonomiyasiga katta hissa qo'shgan A.Menon (1971) uzoq yillar mobaynida Hindiston suv havzlari baliqlarini tadqiq etgan. Turkumning Schizothoracinae kenja oilasiga mansub qator turlarni fanga olib kirgan. Jumladan, Himolay tog'larining janubiy etagi hisoblanuvchi Uttar-Pradesh viloyati suv havzalaridan *Schizothorax kumaonensis* turini qayd etdi [34]. Xuddi shunday, Pokiston suv havzalari baliqlari ustida tadqiqot olib borgan M.Mirza va A.Awan (1978) Hind daryosidan *Schizothorax skarduensis* ni birinchi marotaba tavsifladilar [35].

Y.Wu va Y.Chen (1979) Shimoli-g'arbiy Xitoyning Qinghay hududidan oqib o'tuvchi Tongtian He daryosidan *Schizothorax prenanti scleracanthus* kenja turini qayd etdi [36]. Y.Wang va boshqalar (1981) tomonidan esa Yunnanning Luguhu ko'lidan *Schizothorax* urug'iga oid 3 yangi baliq turi (*S. labrosus*, *S. luguhuensis*, *S. ninglangensis*) tavsiflandi [37]. Oradan ko'p vaqt o'tmay, Y.Chen va boshqalar (1982) Luguhu ko'lidan bundan oldin aniqlangan *Schizothorax* lardan yetarlicha belgilari bilan farqlanuvchi baliq turini ilk bor tavsiflab, yangi turni *S. microstomus* sifatida fanga olib kirdi [38]. Keyingi tadqiqotlarda Yunnanning shimoliy chegaradosh qo'shnisi Sichuandan ham *Schizothorax* urug'ining yangi turlari tavsiflandi. Xususan, T.Fu va M.Ye (1984) Xitoyning Qingyi daryosi havzasidan *S. cryptolepis* ni qayd etdi [39]. Oradan ko'p o'tmay, aynan Qingyi havzasi uchun yana bir *Schizothorax* turini e'lon qildilar. M.Ye va T.Fu (1986) qayd etgan *Schizothorax heterochilus* oldin tavsiflangan *S. cryptolepis* dan bir qator morfologik belgilari, jumladan, tashqi jabra qilchalarining 15-17 taligi (vs. 13-14), qorin tomondan sarg'ish-jigarrang tusda tovlanishi (vs. oqish) kabi belgilari bilan farq qilishi kuzatilgan [40].

Sharqiy Osiyo mintaqasi bilan birgalikda Janubiy Osiyo mamlakatlari, xususan, Nepal suv havzalaridan Schizothoracinae kenja oilasining yangi turlari tavsiflanadi. Jumladan, A.Terashima (1984) Nepalning shimoli-g'arbiy qismidagi Rara ko'lidan *Schizothorax* urug'iga oid yangi uch tur (*S. raraensis*, *S. macrophthalmus*, *S. nepalensis*)ni qayd etdi [41].

XX asrning 80-yillariga qadar Xitoy suv havzalaridan *Schizothorax* urug'iga mansub 30 dan ortiq tur va kenja turlar kashf etilishiga qaramay, tadqiqotchilarning keyingi kuzatuv ishlarida ham ushbu urug'ga oid yana 10 dan ortiq taksonlar aynan shu hududdan tavsiflandi. Jumladan, S.Huang (1985) g'arbiy Yunnan suv havzalari uchun 5 nomdagi tur va kenja turlarni qayd etdi. Xususan, Yingjiang tumani Tongbiguan shahridan *S. oligolepis*, *S. elongatus*, Xima shahridan *S. oligolepis malacathus*, Gongshandan *S. dulongensis* hamda Fumin okrugidan *S. davidi fumingensis* larni fanga olib kirdi [42].

Markaziy Osiy suv havzalari, asosan Qirg'izistonning Talas va Chu daryosi havzasidan ham *Schizothorax* urug'iga oid kenja turlar aniqlandi. I.Pivnev (1985) tomonidan Chu havzasidan *S. pseudaksaensis tschuensis*, Talas havzasidan esa *S. pseudaksaensis talassi* kenja turlari tavsiflandi [43].

J.Yang (1991) Xitoyning Yunnan viloyatidagi Fuxian ko'lidan *Schizothorax lepidothorax* baliq turini qayd etdi [44]. Oradan ko'p o'tmay, Y.Wu va C.Wu (1992) tomonidan De Yingjiang daryosidan *S. rotundimaxillaris*, Y.Chen (1998) tomonidan esa Guijou viloyatining Caohai ko'lidan *S. yunnanensis weiningensis* ilk bor tavsiflab berildi [45, 46].

J.Yang va boshqalar (2009) Yunnan viloyatidan Schizothoracinae kenja oilasiga kiruvchi 3 baliq turi (*S. nudiventris*, *S. heterophysallidos*, *S. beipanensis*)ni tavsiflashdi [47]. Mazkur turlar uzoq yillar mobaynida *Schizothorax griseus* Pellegrin, 1931 sifatida noto'g'ri malakalanib kelingan.

Jumladan, *Schizothorax griseus* ning kashf etilgan joyi Xitoyning Guijou hududiga to'g'ri kelsa-da [25], W.Tsao Yunnanning Lancan Jiang daryosidan yig'ilgan ba'zi *Schizothorax* namunalari *S. griseus* sifatida baholaydi [32]. Bundan tashqari, *S. griseus* ning uchrash nuqtalari sifatida Yunnanning Wu Jiang, Nanpan Jiang, Beipan Jiang, Lancang Jiang va Yiluowadi Jiang daryolari ham ko'rsatilgan [45, 48, 49]. J.Yang va boshqalar (2009)ning olib borgan kuzatuvlari mobaynida Lancan Jiang, Nanpan Jiang va Beipan Jiang daryolaridagi *S. griseus* aslida bu tur emasligi, ular alohida mustaqil turlar ekanligi chuqur morfologik tekshiruvlar natijasida isbotlandi [47]. Lancan Jiang daryosidan qayd etilgan *S. nudiventris* ning *S. griseus* dan burun teshiklari oldida etimoid tipdagi kanalchaning yo'qligi (vs. bor), Nanpan Jiang daryosidan aniqlangan *S. heterophysallidos* ning *S. griseus* dan suzgich pufagi orqa kamerasing uzunligi oldingi kameraning uzunligidan 3-6 marta kattaligi (vs. 2 marta) hamda Beipan Jiang daryosidan tavsiflangan *S. beipanensis* ning *S. griseus* dan voyaga yetgan individlarining ko'krak qafasida tangachalarining yo'qligi (vs. bor) kabi xususiyatlari bilan tavsiflab berilgan [47]. Shu bilan birga, J.Yang va boshqalar (2013) Yunnan viloyatining Tengchong okrugidan oqib o'tuvchi Longchuanjiang va Binlangjiang daryolaridan *S. leukus* va *S. heteri* ni qayd etdi [50].

L.Arunkumar va W.Moyon (2016) Hindistonning shimoli-sharqiy qismidagi Manipur shtati bilan Myanma chegarasidan oqib o'tuvchi Chiva daryosi havzasidan *Schizothorax chivae* baliq turini ilk bor qayd etishdi [51].

C.Zhang va boshqalar (2019) Yangtze havzasining yuqori oqimi hisoblanuvchi Yalong Jiang daryosidan *Schizothorax puncticulatus* ni tavsifladi [52].

Schizothorax urug'iga oid eng so'nggi tavsiflangan tur *Schizothorax gulinensis* Ding, Dai & Huang 2022 bo'lib, ushbu tur Xitoyning Sichuan provinsiyasi Chishui daryosi havzasidan qayd etilgan. Qayd etilgan yangi tur o'sha hudud suv havzalari uchun xos bo'lgan *S. grahami* dan dorsal suzgich qanotidagi shoxlangan nurlar soni 6-7 ta bo'lishi (vs. 8) hamda birinchi jabra ravog'idagi qilchalar sonining kamligi bilan farqlanadi (13-17 vs. 20-27) [53].

Yuqorida *Schizothorax* urug'i ichida kashf etilgan 104 takson (tur va kenja turlar) haqida ma'lumotlar berildi. Ayni vaqtda ushbu taksonlarning 59 tasi valid hisoblanib, shundan 56 tasi *Schizothorax*, 2 tasi *Schizopyge* va 1 tasi *Sinocyclocheilus* urug'i vakillari hisoblanadi.

***Schizothorax* urug'ining joriy sistematik holati.** Xalqaro baliqlar katalogi [ECoF]ga ko'ra, ayni vaqtda *Schizothorax* urug'ining 70 valid turi mavjud bo'lib, ular Osiyo qit'asining Xitoy mintaqasidan to Erongacha bo'lgan hududlardagi suv havzalarida tarqalgan [54].

Ushbu turlarning 14 tasi boshqa urug'larda kashf etilgan bo'lib, olib borilgan morfologik yoki molekulyar tadqiqotlar natijasida *Schizothorax* urug'iga ko'chib o'tgan. Jumladan, *Cyprinus richardsonii* Gray, 1832, *Oreinus progastus* McClelland, 1839, *O. grahami* Regan, 1904, *O. molesworthi* Chaudhuri, 1913, *O. prenanti* Tchang, 1930, *O. longibarbus* Fang, 1936, *O. chongi* Fang, 1936, *O. wangchiachii* Fang, 1936, *Racoma labiatus* McClelland, 1842, *R. integrilabiatus* Wu et al., 1992, *R. curvilabiatus* Wu & Tsao, 1992, *R. ramzani* Javed, Azizullah & Pervaiz, 2012, *Paratylognathus davidi* Sauvage, 1880 hamda *Aspiostoma zarudnyi* Nikolskii, 1897 tavsiflangan bo'lib, keyinchalik bir qator tadqiqotlar natijalariga ko'ra, ular aynan *Schizothorax* urug'iga mansubligi isbotlangan [32, 55, 56, 57]. Ayni vaqtdagi valid turlarning 56 tasi tavsiflanganidan beri o'z urug'ida turibdi [54]. Biroq, *S. nasus*, *S. niger*, *S. huegelii*, *S. esocinus*, *S. euryostomus*, *S. argentatus*, *S. biddulphi*, *S. sinensis*, *S. pseudoaksaiensis*, *S. dolichonema*, *S. macropogon*, *S. waltoni*, *S. taliensis*, *S. oconnori*, *S. dainellii*, *S. yunnanensis*, *S. griseus*, *S. gongshanensis*, *S. lantsangensis*, *S. lissolabiatus*, *S. meridionalis*, *S. myzostomus*, *S. nukiangensis*, *S. parvus*, *S. kumaonensis*, *S. labrosus*, *S. ninglangensis*, *S. microstomus*, *S. raraensis*, *S. dulongensis*, *S. elongatus*, *S. malacathus*, *S. oligolepis*, *S. rotundimaxillaris* kabi turlar dastlab o'z urug'ida kashf etilgan bo'lsa ham, keyinchalik bir qator tadqiqotchilar tomonidan *Oreinus*, *Schizothorachthys*, *Racoma*, *Schizopyge*, *Aspiorhynchus*, *Schizocypris* urug'iga ko'chirib o'tkazilgan [32, 45, 58, 59], lekin keyingi ixtiologik tadqiqotlar asosida ularning *Schizothorax* urug'i vakili ekanligi ma'lum bo'ldi [38, 49, 57, 60, 61, 62].

Ayni vaqtda *Schizothorax* urug'ida kashf etilgan ayrim tur yoki kenja turlarning joriy taksonomik maqomi noaniqligicha qolmoqda. Bularga O'zbekistondan *S. euryostomus anisolepida* (Urgut daryosi), *S. intermedius niger* (Zarafshon daryosi), *S. intermedius angreni* (Ohangaron daryosi) va *S. intermedius kessleri* (Surxondaryo daryosi), Qozog'istondan *S. intermedius*

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malacorrhynchus (Oqsuv daryosi) hamda Qirg'izistondan *S. pseudaksaiensis tschuensis* (Chu daryosi) kabi taksonlarni misol qilib keltirish mumkin [54]. Bu borada ushbu taksonlarning eng avval topilgan joyi (*type locality*)dan *Schizothorax* namunalarini olish va ularni zamonaviy taksonomik metodika, jumladan, genetik-molekulyar darajada tekshirish zarur hisoblanadi. Bundan tashqari, Xitoy va Markaziy Osiyo suv havzalaridan tavsiflangan *S. tarimi*, *S. lacustris*, *S. microlepidotus*, *S. dayi*, *S. altior* lar *Schizothorax biddulphi* Günther, 1876 ning sinonimi ekanligi keltirilgan [32]. Shu kabi ko'plab taksonlar bugungi kunda boshqa turlarning sinonimi holida qolgan. Boshqa tomondan, *Schizothorax* urug'idagi ayrim turlar Schizothoracinae kenja oilasining boshqa urug'idagi turlarning sinonimiga o'tkazilgan. Masalan, *S. longipinnis*, *S. micropogon*, *S. minutus*, *S. affinis*, *S. aksaiensis* va *S. irregularis* kabi turlar hozirda *Schizopyge curvifrons* ning, Turkiyaning Egirdir ko'lidan tavsiflangan *S. prophyllax* esa *Capoeta pestai* ning sinonimi sifatida qayd etilgan [61, 63]. Shu bilan birga, ayrim *Schizothorax* urug'i vakillarining ayni vaqtdagi maqomi ham qo'shimcha taksonomik tekshirishlarni taqozo etadi. Jumladan, Amudaryo havzasidan qayd etilgan *Schizothorax regellii* Herzenstein, 1889 ayni vaqtda *S. eurystomus* ning sinonimi sifatida qayd etilgan bo'lib, bir qator tadqiqotchilarning Amudaryo havzasi *Schizothorax* populyatsiyalarining molekulyar tahlil etish natijalari ushbu populyatsiyaning *S. eurystomus* emasligini ko'rsatdi [64, 65]. Bu esa hali *Schizothorax* urug'ining taksonomik maqomiga aniqlik kiritilishi lozim bo'lgan taksonlarning yetarlicha mavjudligini bildiradi.

ADABIYOTLAR RO'YXATI

1. Кесслер, К. (1872). Ихтиофауна Туркестана. *Изв. о-ва любителей естествозн., антропол. и этнографии*, 10, 47–76.
2. Chen, H., Zhang, H., Chen, Y., Freyhof, J. (2019). A review of the *Barbatula* loaches (Teleostei: Nemacheilidae) from north-eastern China, with the description of four new species. *Zootaxa*, 4565(1), 001–036.
3. Sheraliev, B., Peng, Z. (2021). *Triplophysa ferganaensis*, a new loach species from Fergana Valley in Central Asia (Teleostei: Nemacheilidae). *Journal of Fish Biology*, 99(3), 807–817.
4. Rozimov, A., Wang, Y., Wang, M., Zou, M., Sobirov, J., Karimov, E., Kholmatov, B., Freyhof, J., Namozov, S., Wang, C., Li, X., Guo, B. (2025). Mitochondrial genome insights into the phylogenetics and biogeographic evolution of snow trout (Cyprinidae, *Schizothorax*) in the Tien Shan Mountains. *Zoosystematics and Evolution*, 101(1), 91–102.
5. Heckel, J.J. (1838). Fische aus Caschmir gesammelt und herausgegeben von Carl Freiherrn von Hügel, beschrieben von J.J. Heckel. *Wien*, 1–86.
6. McClelland, J. (1842). On the fresh-water fishes collected by William Griffith, Esq., F. L. S. Madras Medical Service, during his travels under the orders of the Supreme Government of India, from 1835 to 1842. *Calcutta Journal of Natural History*, 2 (8), 560–589.
7. Kessler, K.F. (1870). Description of a new fish species of the family, Cyprinoidei. *Труды Санкт-Петербургского Общества Естествоиспытателей*, 1, 320–323.
8. Кесслер, К.Ф. (1874). Рыбы. В: Экспедиция Федченко в Туркестан. Зоогеографические исследования. *Изв. о-ва любителей естествозн., антропол. и этнографии*, 11, i-iv + 1–63.
9. Kessler, K.F. (1879). Beiträge zur Ichthyologie von Central-Asien. *Bulletin de l'Académie Impériale des Sciences de St. Pétersbourg*, 25, 282–310.
10. Günther, A. (1876). Remarks on fishes, with descriptions of new species in the British Museum, chiefly from southern seas. *Annals and Magazine of Natural History*, 17 (101), 389–402.
11. Günther, A. (1889). Fishes. The zoology of the Afghan Delimitation Commission. *The Transactions of the Linnean Society of London. Second Series. Zoology*, 5 (3), 53–142.
12. Day, F. (1877). On the fishes of Yarkand. *Proceedings of the Zoological Society of London*, 781–807.
13. Nikolskii, A.M. (1886). Bemerkungen über einige Fische des Balckasch-Beckens. *Bulletin de l'Académie Impériale des Sciences de St. Pétersbourg*, 30, 12–14.
14. Никольский А.М. (1903). О трех новых видах рыб из Средней Азии (*Schizothorax kozlovi* sp. n., *Ptychobarbus kaznakovi* sp. n., *Nemachilus fedtschenkoae* sp. n.). *Ежегодник, Зоологический музей Императорской академии наук*, 8: 90–94.
15. Herzenstein, S.M. (1889). Fische. In: Wissenschaftliche Resultate der von N.M. Przewalski nach Central-Asien unternommenen Reisen. *Zoologischer Theil*, 3 (2), 91–180.
16. Regan, C.T. (1905). Descriptions of five new cyprinid fishes from Lhasa, Tibet, collected by Captain H.J. Walton, I. M. S. *Annals and Magazine of Natural History*, 15 (86), 185–188.
17. Regan, C.T. (1907). Descriptions of three new fishes from Yunnan, collected by Mr. J. Graham. *Annals and Magazine of Natural History*, 19 (109), 63–64.
18. Berg, L.S. (1907). Verzeichnis der Fische von Russisch-Turkestan. *Ежегодник, Зоологический музей Императорской академии наук*, 10 (3-4), 316–332.
19. Берг, Л.С. (1932). Пресноводные рыбы СССР и соседние страны. Часть I. Ленинград, 1–543.
20. Lloyd, R.E. (1908). Report on the fish collected in Tibet by Capt. F.H. Stewart, I.M.S. *Records of the Indian Museum*, 2 (4), 341–344.

21. Zugmayer, E. (1909). Descriptions of four new cyprinoid fishes from high Asia. *Annals and Magazine of Natural History*, 4 (23), 432–435.
22. Vinciguerra, D. (1916). Pesci raccolti dalla spedizione de Filippi nell'Asia centrale. *Annali del Museo Civico di Storia Naturale di Genova*, 47, 123–149.
23. Norman, J.R. (1923). Three new fishes from Yunnan, collected by Professor J.W. Gregory, F.R.S. *Annals and Magazine of Natural History*, 11 (64), 561–563.
24. Lohberger, K. (1929). Einige noch nicht beschriebene Fischformen aus dem Thian-Schan. *Anzeiger der Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse*, 66 (16), 157–158.
25. Pellegrin, J. (1931). Description de deux Cyprinidés nouveaux de Chine appartenant au genre *Schizothorax* Heckel. *Bulletin de la Société Zoologique de France*, 56 (2), 145–149.
26. Pietschmann, V. (1933). Drei neue Fischarten (Cypriniden) aus Kleinasien. *Anzeiger der Akademie der Wissenschaften in Wien, Mathematisch-Naturwissenschaftliche Klasse*, 70, 21–23.
27. Турдаков, Ф.А. (1936). Иктиофауна среднего течения реки Зеравшан и горных ручьев. *Труды Узбекского государственного университета*, 7, 167–195.
28. Турдаков, Ф.А. (1968). Замечания о разновидностях *Schizothorax intermedius*. В: Иктиологические и гидробиологические исследования в Киргизии. *Известия Академии наук Киргизской ССР*, 3–45.
29. Турдаков, Ф.А. (1955). Обзор иктиофауны реки Талас. *Учебные материалы биологического факультета Кыргызского государственного университета*, 5, 128–163.
30. Некрашевич, Н.Г. (1948). Новые формы рыб Алакульских озер. *Ученые Запінского Томского университета*, 11, 119–124.
31. Fowler, H.W., Steinitz, H. (1956). Fishes from Cyprus, Iran, Iraq, Israel and Oman. *Bulletin of the Research Council of Israel*, 5B (3-4), 260–292.
32. Tsao, W.-H. (1964). *The cyprinid fishes of China*. Science Press, Shanghai, 1, 228 pp. (In Chinese)
33. Karaman, M.S. (1969). Zwei neue Süßwasserfische aus Afghanistan und Iran. *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 66, 55–58.
34. Menon, A.G.K. (1971). Taxonomy of fishes of the genus *Schizothorax* Heckel with the description of a new species from Kumaon Himalayas. *Records of the Zoological Survey of India*, 63 (1-4), 195–208.
35. Mirza, M.R., Awan, A.A. (1978). *Schizothorax skarduensis* (Pisces, Cyprinidae), a new fish from Pakistan. *Biologia*, 24 (2), 199–203.
36. Wu, Y.-F., Chen, Y. (1979). Notes on fishes from Golog and Yushu region of Qinghai Province, China. *Acta Zootaxonomica Sinica*, 4 (3), 287–296. (In Chinese)
37. Wang, Y.-H., Zhuang, D.-D., Zhang, K.-X., Gao, L.-C. (1981). Descriptions of three new schizothoracid fishes from Lake Lugu of Yunnan Plateau, China. *Acta Zootaxonomica Sinica*, 6 (3), 328–333. (In Chinese)
38. Chen, Y.-Y., Zhang, W., Hwang, S.-Y. (1982). Speciation in schizothoracid fishes of Lake Lugu. *Acta Zoologica Sinica*, 28 (3), 217–225. (In Chinese)
39. Fu, T.-Y., Ye, M.-R. (1984). Notes on a new species of the genus *Schizothorax* from Sichuan, China. *Zoological Research*, 5 (2), 165–168. (In Chinese)
40. Ye, M.-R., Fu, T.-Y. (1986). A new species of schizothoracid fishes from Sichuan, China (Cypriniformes: Cyprinidae). *Zoological Research*, 7 (1), 65–68. (In Chinese)
41. Terashima, A. (1984). Three new species of the cyprinid genus *Schizothorax* from Lake Rara, northwestern Nepal. *Japanese Journal of Ichthyology*, 31 (2), 122–135.
42. Huang, S.-Y. (1985). On five new species and subspecies of the genus *Schizothorax* Heckel from Yunnan, China. *Zoological Research*, 6 (3), 209–217. (In Chinese)
43. Пивнев, И.А. (1985). *Рыбы бассейнов рек Чу и Талас*. Издательство Илим, Фрунзе, 189 с.
44. Yang, J.-X. (1991). The fishes of Fuxian Lake, Yunnan, China, with description of two new species. *Ichthyological Exploration of Freshwaters*, 2 (3), 193–202.
45. Wu, Y.-F., Wu, C.-Z. (1992). *The Fishes of the Qinghai-Xizang Plateau*. Sichuan Publishing House of Science & Technology, Chengdu, 599 pp. (In Chinese)
46. Chen, Y.-Y. (1998). *The fishes of the Hengduan Mountains region. The series of the scientific expedition to the Hengduan Mountains of the Qinghai-Xizang Plateau*. Science Press, Beijing, 364 pp.
47. Yang, J., Chen, X.-Y., Yang, J.-X. (2009). The identity of *Schizothorax griseus* Pellegrin, 1931, with descriptions of three new species of schizothoracine fishes (Teleostei: Cyprinidae) from China. *Zootaxa*, 23–40.
48. Chen, Y.-Y., Tsao, W.-X. (2000). Schizothoracinae. Osteichthyes. Cypriniformes III. *Science Press, Beijing*, 273–390. (In Chinese)
49. Chu, X.-L., Chen, Y.-R. (1989). *The fishes of Yunnan, Part I Cyprinidae*. Science Press, Beijing, 377 pp.
50. Yang, J., Zhen, L.-P., Chen, X.-Y., Yang, J.-X. (2013). Description of two new species and revision of *Schizothorax* distributed in the Irrawaddy drainage area in China. *Zoological Research*, 34 (4), 361–367. (In Chinese)
51. Arunkumar, L., Moyon, W.A. (2016). *Schizothorax chivae*, a new schizothoracid fish from Chindwin basin, Manipur, India (Teleostei: Cyprinidae). *International Journal of Fauna and Biological Studies*, 3 (2), 65–70.
52. Zhang, C.-G., Yang, J.-X., Zhao, Y.-H. and Pan, X.-F. (eds.) (2019). *Fishes in the Jinsha Jiang River basin, the upper reaches of the Yangtze River, China*. Science Press, Beijing: i-xxxii + 607 pp.
53. Ding, R.-H., Dai, Y.-X., Huang, Y.-Y. (2022). A new species of the genus *Schizothorax* from Sichuan, China (Cypriniformes: Cyprinidae). *Sichuan Journal of Zoology*, 41 (3), 300–303. (In Chinese)
54. Fricke, R., Eschmeyer, W.N., Van der Laan, R. (2025). Eschmeyer's Catalog of Fishes: Genera, Species, References. (<http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>). (murojaat etilgan sana: 10.02.2025).

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55. Shrestha, J. (1978). Fish fauna of Nepal. *Journal of Natural History Museum Tribhuvan University*, 5 (1-4), 33–43.
56. Zhang, C.-G., Cai, B., Xu, T.-Q. (1995). Fishes and fish resources Xizang, China, 162 pp.
57. Coad, B.W. (1981). Fishes of Afghanistan, an annotated checklist. *National Museum of Canada Publications in Zoology*, 14, i-v + 1–26.
58. Menon, A. G. K. (1999). *Check list - Fresh water fishes of India*. Records of the Zoological Survey of India, Occasional Paper, 175, i-xxix + 366 pp.
59. Kottelat, M. (2013). *The fishes of the inland waters of southeast Asia: a catalogue and core bibliography of the fishes known to occur in freshwaters, mangroves and estuaries*. Raffles Bulletin of Zoology Supplement, 27, 663 pp.
60. Zhu, S.-Q. (1995). *Synopsis of freshwater fishes of China*. Jiangsu Science and Technology Publishing House, Nanjing, i-v + 549 pp. (In Chinese)
61. Kullander, S. O., F. Fang, F., Delling, B., Åhländer, E. (1999). The fishes of the Kashmir Valley. In: L. Nyman (ed). *River Jhelum, Kashmir Valley. Impacts on the aquatic environment*. *Swedmar, Göteborg*, 99–167.
62. Zhang, C.-G., Zhao, Y.-H. et al. (2016). *Species Diversity and Distribution of Inland Fishes in China*. Science Press, Beijing, China, i-viii + 284 pp. (In Chinese)
63. Çiçek, E., Eagderi, S., Sungur, S. (2021). *Schizothorax prophyllax* (Pietschmann, 1933) and *Capoeta mauricii* Küçük, Turan, Şahin & Güle, 2009, junior synonyms of *Capoeta pestai* (Pietschmann, 1933). *Spixiana*, 44 (2), 203–208.
64. Sheraliev, B., Peng, Z. (2021). Molecular diversity of Uzbekistan's fishes assessed with DNA barcoding. *Scientific Reports*, 11, e16894.
65. Artaev, O., Thoni, R., Mirzoev, N., Levin, B. (2025). Ichthyofauna of Tajikistan: Diversity and Changes over the Past Century. *American Museum Novitates*, № 4032, 55 pp.