

PASSERINE BIRDS BREEDING IN THE LOWER MUSTANG AREA

(Himalaya and partly TransHimalaya, NEPAL, 2005-2017) :

species composition, distribution, habitats

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(*in June 2017, observations were carried out by K.E.Mikhailov and V.E.Ivushkin).

Years of field works: 2005 (shortly); 2009, 2013, 2014 (all - May); 2017(June)

Territory and Methods: explored is an area of the Lower Mustang south to Tukucho and north to Kagbeni and Muktinath. In March to April 2005 and April to May 2009, there were mainly explored Kali-Gandaki valley, including radial valleys\gorges of Jhong Khola (way from Kagbeni to Muktinath), Pond-Khola (way to Lupra), Dbynungpug-Khola (Kaisang valley) and Thapa-Khola gorge (Tukucho Gorge). In May 2013 and 2014, and in June 2017, observations were made (with living in tents at heights 3000 m - 3500 m) at Dhaulagiri and Annapurna forested slopes and in subalpine steppe, bush and shrubberies above the upper forest line (upper parts of Tukucho Gorge and Yak Kharha; Nilgiri Wall; 5 camp sites overall).

Designations:

Density and Status:

мн, об, нем, ред [abundant\common\uncommon\rare).

ns - nesting settlements (гнездовое население); **ps** - peak of passing (прилет\пролет); **br** - broods (кочующие выводки); **sm** - cardueline summering (летующие вьюрковые, - в ожидании своего гнездового месяца).

Geography:

KG - Kali-Gandaki Canyon and Valley (river pebbled bed, road and canyon's slopes with small Cypress and bush, small sayrs, villages, gardens on lower terraces). **M** - Muktinath Area (forestless Tibetan-like landscape from Jomosom to Kogbeni, Lupra and Muktinath; 2700-4000m (2005, 2009)); **MO** - Lupra\Muktinath oases (various gardens) (2009, 2013)); **K** - Kaisang river Valley (2500-2700m, secondary pine stands of *Pinus wallichiana*) (2009, 2013).

T - Tukucho Gorge (forested gorge of Thapa Khola, 2500-3300m) and subAlpine to Alpine terraces above the gorge (3300 - 4000m), (2009-2017).

YK - Yak Kharha at NE Dhaulagiri slope (extensive flattness, by terraces, at and above the upper forest line, 3100-5000m) (2014,2017).

N - NW Nilgiri Wall (N Annapurna part; sharp and logged forested slope, 2700-3500 m) (2009,2013).

Habitats (биотопы):

fp - pine (*P.wallichiana*) and pine-cypress forest;

fm - forest mixed (*Cypressus-Tsuga-Abies*, in river gorges) (below 2700m: mainly in T);

ff - fir forest (*Abies* spp.) in the upper forest line (up to 3200m: **T,N,YK**)[inclusions of spruce (*Picea* spp.) in ff occur only on Nilgiri slope];

fb - the birch (*Betula utilis*) forest upper stripe just above the *Abies* forest and often including fir trees (**T,N,YK**);

bs1 - tree-like bush rhododendron thickets at upper forest line (h=3-4m, up to 6m) (**T,YK**) (*примеч. - обычно в форме стланика, часто как нижний ярус внутри березняка;

bs2 - subalpine bush windows among the upper forest belt (**T**) (*примеч. - с барбарисом, жимолостью, бамбуком, древовидной черёмухой и ивами);

bs3 - Subalpine dense bush patches (h=2-3m) above the upper tree line in the sites with creeks (**YK**) (*примеч. - барбарис и шиповник, реже кустарниковая карагана или можжевельниковые розетки с отдельными березами или без них);

bs4 - Subalpine to Alpine shrubbery patches (h=0,5-1m) at the edge of pastures and the balconies of cliffs (**T**);

stp - Tibetan-like steppe with yak pastures, 3500-4500m (**YK,T,N**);

sd - stony deserts and rocks above 4000 м (YK,M) (**примеч.* - щебнистая и каменная пустыня, отчасти в снегу, скалки);

grg - gorges/canyons as such (**примеч.* - некоторые виды связаны с ущельями, как таковыми, т.е. как с "сигнальной" организацией пространства, независимо от типа леса и присутствия воды);

sl - earth slopes of Kali-Gandaki canyon with bush;

gd - apple and other gardens near villages;

riv - severe water streams with large to huge boulders (KG and smaller rivers - Thapa khola etc.);

vil - Mustang villages.

Table 1. LIST OF SPECIES \ DESTRIUTON | HABITATS \ YEARS

(overall: **93-95** species of passeriform birds \ **23** species -non-passeriform birds)

Species (виды)	Density:Habitats обиле\биотопия	2009 May 1-2weeks	2013-2014 May 1-2ws\3-4ws	2017 June 1-2weeks	2005 Mar- Apr
Common and regular species -38					
<i>Parus rubidiventris</i> (in the range - race <i>beavani</i> + hybrids)	об: fm,ff,fb	T	T,N(ns)	T, YK(br)	
<i>Parus dichrous</i> (race ? <i>dichrous</i>)	нем:fm,ff(fb)	T	T(ns?)	T, YK(br)	
<i>Parus monticolus</i> (race ? <i>monticolus</i>)	нем: vil-gd		KG	KG	
<i>Parus ater</i> (race ? <i>martensi</i> Eck1998 specific for Kali-Gandaki valley)	нем (2017)	–	–	T(fb-ns),YK	
<i>Phylloscopus pulcher</i> (race <i>pulcher</i>)	мн: fb (bs1)		T, N, YK(ns)	T, YK(ns)	
<i>Phylloscopus trochiloides</i> (race <i>trochiloides</i>)	мн: fb (ff, bs1)		T, N(ns)	N, T,YK(ns)	
<i>Phylloscopus reguloides</i>	об\мн: fm		T, N	T,N(ns)	
<i>Phylloscopus affinis</i> (race <i>affinis</i>)	мн: bs3, sl	KG,M(ps)	KG, K-ps\ns	KG, YK(ns)	
<i>Phyll. magnirostris</i>	об: grg	T	T, KG(ns)	T, KG(ns)	
<i>Seicercus whistleri</i>	об: fm,ff	T	T(ns)	T(ns)	
<i>Cettia brunnifrons</i> (race <i>brunnifrons</i>)	об: bs3 (bs2)	N	T, N(ns)	T, YK(ns)	
<i>Cettia flavolivacea</i>	об: bs2 (bs3)		T(2013(ps?))	T, YK(ns)	
<i>Tesia [Cettia] castaneoc.</i> (race <i>castaneocoronata</i>)	об\нем:bs2-bs4		N, T	T	
<i>Garrulax variegatus</i>	об: bs3,gd	M(gd)	T, YK	T, YK	
<i>Rhipidura hypoxantha</i>	об: fm,ff	T	N, T,YK(r-ns)	N, T (ns)	

<i>Ficedula strophciata</i>	нем\об:bs1		T(ns)	T(ns)	
<i>Ficedula tricolor</i> (race ?tricolor\minuta)	нем:bs1		T(ns)	T(ns), N(br)	
<i>Tarsiger (cyanurus)</i> <i>rufilatus</i>	мн\об: ff,fp,fb		T,N(ns)	T,YK(ns\br)	
<i>Myophonus caeruleus</i> (race temminckii)	об: riv,grg	KG,M,T	KG, T	KG, T	
<i>Phoenicurus frontalis</i>	об: stp(sd,bs3)	M	T, YK	T, YK	
<i>Phoenicurus schisticeps</i>	нем: fp-fm	KG	N, KG-YK	KG-YK	
<i>Phoen. caeruleucephalus</i>	нем: fp-fm	KG	KG		
<i>Aethopyga ignicauda</i> (race ignicauda)	об: bs1,bs2		T	T	
<i>Lanius tephronotus</i> (race tephronotus)	об: sl-gd	KG,M(ps)	M,KG(ns)	YK(bs3-ред)	
<i>Nucifraga caryocatactes</i> (race hemispila)	нем\об:fp(fm-fb)	K, N	N	N	
<i>Corvus macrorhynchos</i> (race intermedius)	об: fm-fb(stp),vl	M,K,KG	KG,T,YK	KG,T,YK	
<i>Pyrrhonorax pyrrhonorax</i>	об: stp-grg	M,KG, T	KG, T, YK	KG,T,YK	
<i>Pyrrhonorax graculus</i>	нем?: stp-grg	M	T, YK	T, YK	
<i>Passer montanus</i> (race obscuratus/?tibetanus)	мн: vil	KG	KG	KG	
<i>Passer domesticus</i> (race parkini)	нем: vil	KG	KG	KG	
<i>Anthus hodgsoni</i> (race hodgsoni)	мн\об: stp(fb)		T,YK(мн-ps)	T,YK(об-ns)	
<i>Mycerobas carnipes (car.)</i>	нем\об: fb,bs3-4		YK(sm?)	YK(sm?)	
<i>Pyrrhula erythrocephala</i>	об: fb,bs1-3		T, YK	T, YK	
<i>Propyrrhula subhimahala</i>	нем\ред: fb,bs2-3		T(fb-sm)	T, YK(b3-sm)	
<i>Carpodacus erythrinus</i> (race roseatus)	об\нем: fb,bs2-3	LO(ps?)	??	?T, YK(об)	
<i>Carpodacus nipalensis</i>	об\нем: fb,bs1-3		T(sm?)	T, YK(sm?)	
<i>Serinus pusillus</i>	об: M-sd(flocks)	M(sm?)	M(sm?)		
<i>Emberiza cia</i> (race flemingorum)	об\мн:sl-gd	KG,M	KG	KG	

Sporadic or rare species-44-46					
<i>Parus rufonuchalis</i> (extreme east of range)	ред\нем?(fm)	K		?	
<i>P. xanthogenys</i> (nom. race)	ред(2005)(gd)				KG
<i>Certhia nipalensis</i> + <i>?hodgsoni</i> (<i>familiaris</i>)	ред: (fm-fb)		T(ns?)	T(ns)	
<i>Tichodorma muraria</i>	ред (2009)	M(Lupra)			
<i>Phylloscopus chloronotus</i> (<i>paca chloronotus</i>)	нем (2017)		?N(ff)	YK,T(fm-fb)	
<i>Phylloscopus humei humei</i>	нем: 2013-14	LO(ps)	KG(ps),N(ff)	–	
<i>Regulus regulus</i> (race <i>himalaensis</i> ? <i>sikkimensis</i>)	нем: ff	N	N	YK	
<i>Locustella [Bradypterus]</i> <i>thoracicus</i> (race <i>thoracica</i>)	ред (2017)		–	T(stp-bs4)	
<i>Pnoepyga albiventer</i> (race <i>?pallidor</i>)	нем:grg-bs2		T(bs2-ns)	T(bs2-ns)	
<i>Fulvetta [Alcippe]</i> <i>vinipectus</i> (race <i>vinipectus</i>)	нем: fm(bamboo)	T	T(2013)	–	
<i>Garrulax lineatus</i> (<i>setafer</i>)	ред (2014)		KG(sl)		
<i>Garrulax affinis</i>	ред (2005)				M(ps)
<i>Pomatorhinus ruficollis</i>	ред (2013-14)		T(bs1)		
<i>Ficedula superciliaris</i> (race <i>?superc.\aestigma</i>)	ред (2013,2017)	T(bs2)		T(bs1)	
<i>Luscinia pectoralis</i>	нем:bs3-bs4		YK(ред-ps)	YK(нем-ns)	
<i>Hodgsonius phoenicur.</i> (race <i>phoenicuroides</i>)	нем (2017)			YK(bs3-ns)	
<i>Tarsiger chrysaeus</i> (<i>chrys.</i>)	ред (2017)			T(bs4-ns)	
<i>Tarsiger hyperythrus</i>	ред (2013)		N(ff)		
<i>Phoenicurus ochruros</i> (race <i>rufiventris</i>)	нем(2009)	M(stp-sd)			
<i>Turdus albocinctus</i>	ред (2017)			T(bs2)	
<i>Turdus viscivorus bonap.</i>	ред (2017)			YK(ff-stp)	
<i>Zoothera ?dixoni</i>	ред\нем		?T(stp-ps)	YK(ff-stp)	
<i>Monticola solitarius</i>	нем: vil-sl-fp	KG	KG	KG	

<i>Monticola rufiventris</i>	ред (2009)	T(fm)			
<i>Saxicola torquata</i> (przew.)	нем (2009)	M(?ps\ns)			
<i>S.axicola ferrea</i>	ред		KG (gd-ps?)		
<i>Pericrocotus ethologus</i> (race ?favillaceus)	нем(fp-fm)	KG(N)-ns	KG(N)-ns	KG(T:br-ps?)	
<i>Conostoma aemodium</i>	ред:fm-fb-bs1	T(fm-sm?)	T(bs1-ps\sm?)		
<i>Troglodites troglodites</i> (paca nipalensis)	ред (2017)	T	–	YK(ff-ns)	
<i>Prunella collaris</i> (race nipalensis)	(ред):sd	M(TL-ps)			
<i>Prunella storphiata</i> (race strophata\?jordoni)	ред (2013)		YK(bs3-ps)	–	
<i>Prunella fulvescens</i>	ред\нем	M(ps-ns?)	–	–	
<i>Sturnus pagodarum</i>	ред (2014-vil)	–	KG(Marpha)	–	
<i>Corvus corax</i>	ред:stp	M			
<i>Anthus roseatus</i>	нем: stp(sd)		YK(ред-ps)	T (нем-ns)	
<i>Mycerob. melanozhanos</i>	ones (2005)				KG-sl
<i>Pyrrhula nipalensis</i>	ред:fm?-(fb)		T(sm?)		
<i>Loxia recurvirostra</i> (race himalayensis)	ones(2013)		N(ff)		
<i>Spinus tibetanus</i>	об(2014)	–	T,YK(fb,ps)	–	
<i>Carduelis caniceps</i>	нем(2017)	–	–	YK(stp-sm?)	
<i>Carduelis spinoides</i>	нем(2017)			T(gd-sm?)	
<i>Carpodacus rodopeplus</i>	ред(2013)		K,N (females)	YK(bs3-sm?)	
<i>Carpodacus thura</i>	ред(2017)		–	YK(bs3-sm?)	
<i>C. pulcherrimus</i> (pulch.)	нем(2014)	M(bs3/stp)	YK(bs3-ps?)	–	
<i>C. (rubicilla or rubicilloides)</i>	ones,male-2009	M (Torung La Pass)			
Near-water species - 6					
<i>Rhyacornis fuliginosus</i>	об: riv	KG	KG	KG	
<i>Chaimarrornis</i>	нем: riv	M(об)	T(ред)		

<i>leucocephalus</i>					
<i>Cinclus pallasi</i>	ред?: riv		T		
<i>Motacilla cinerea</i>	об: riv	M,KG,K	KG, T	KG,T	
<i>Mot. (personata) alboides</i>	об: riv	M,KG	KG	KG	
<i>Mot. maderaspatensis</i>	ред: riv			KG	
Arial species - 2-3					
<i>Ptyonoprogne rupestris</i>	нем: riv	KG	KG	KG	
<i>Delichon nipalensis</i> + ? <i>dasyopus</i>	нем:grg-sd-stp		T(верх, ns),M	T(верхи, ns)	
Supplementary: Non-passerine species-23					
<i>Cuculus canorus</i>	нем:fb-stp	M(Lupra)	YK	YK	
<i>Columba leuconota</i>	нем\об: grg-sd	KG(ред)	T (об) +gd	T(об)+gd	
<i>Columba livia</i>	нем: sl, vil	M(об)	M(об)	KG(нем)	
<i>Columba rupestris</i>	ред	M			
<i>Streptopelia orientalis</i>	нем: gd-sl	KG	KG	KG	
<i>Caprimulgus indicus</i>	ред?(2013)		N(fp-ns)		
<i>Callocalia brevirostris</i>	об\нем	M	M	?	
<i>Strix aluco</i> (*****)	нем: fm-fb		T(calls)	T,YK(calls)	
<i>Accipiter nisus</i>	нем: fb-stp		YK	T	
<i>Hieraetus pennatus</i>	нем (2013-14)		KG-YK	KG-T	
<i>Buteo hemilasius\rufinus</i>	ред	M(ps?)	KG-YK	KG-YK (sm?)	M(ps?)
<i>Buteo buteo</i>	ред	M(ps?)	KG-YK	KG-YK (sm?)	M(ps?)
<i>Gyps himalayensis</i>	об	KG,M	KG,YK	KG,YK	
<i>Gyps fulvus</i>	?vagrant	KG		KG	
<i>Gypaetus barbatus</i>	нем	KG	KG,T,YK	KG,T,YK	
<i>Milvus migrans</i>	нем	KG	KG	KG	
<i>Falco tinnunculus</i>	ред		T	YK	
<i>Lophophorus impejanus</i>	об: fb-stp		T	T, YK	
<i>Alectoris chukar</i>	об: sl	M	M,KG	KG,YK	
<i>Lerwa lerwa</i>	нем: stp-sd		T	YK	
<i>Tetraogallus (tibetanus or\and himalayensis)</i>	нем: stp-sd	M	T,YK		
<i>Gallinago solitaria</i>	нем(2005)				M(ps)