

Notes on carrion beetles (Coleoptera: Silphidae) from India

—fclg"q" o tejqlftqwvxkv ej"dtqwe[ej"*Eqngqrvgtc<"Uknr jkfcg+"|"Kpflg

Lcp"T flk MC¹⁾, Hana ŠÍPKOVÁ¹⁾ & Jan SCHNEIDER²⁾¹⁾Department of Ecology, Faculty of Environmental Sciences, Czech University of Life Sciences Prague, Kamýcká 129, CZ-165 21 Praha 6, Czech Republic;

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Fluvtkidwvqkq."Eqngqrvgtc."Uknr jkfcg."Kpflc."Rcncgetevke"tgikqp."Qtkgpvcn"tgikqp

Abstract. Records of eight species of carrion beetles from India are presented. *Nicrophorus melissae* Sikes et Madge, 2006, *N. trumboi* Sikes et Madge, 2006 and *Thanatophilus porrectus* (Semenov, 1890) are reported from Kpflc"lqt"vjg"Łtuw"vk o gl" *Nicrophorus nepalensis*" J qrg."3 : 53"ku"tgrqvtgf"htq o"Kpflc<"Ctwpcjcn"Rtcfguj"lqt"vjg"Łtuw" time. Distribution of *N. nepalensis* and *Thanatophilus minutus* Kraatz, 1876 in India is summarized and mapped. Cf flvkqpcn"tgegpv"tgeqt fu"qh" *Nicrophorus encaustus* Fairmaire, 1896 from Jammu and Kashmir and *Thanatophilus dentiger*"*Ug o gpqx."3 : ; 2+htq o" Wwctcmjcpf"ctg"rtqxfgf"0" C"pgetqr jciqwu"cuuqekcvkp"qh" *Necrophila (Deutosilpha) twŁvjqtz* (Wiedemann, 1823) with carrion of *Semnopithecus entellus* (Dufresne, 1797) (Primates: Cercopithecidae) is reported.

INTRODUCTION

Qpn{ "3 : "urgekqu"qh"ecttkqp"dggvngu"*35"urgekqu"qh"Uknr jkpcg"cpf"Łxg"urgekqu"qh"Pketqr j qtk-
pcg+" ygtg"mpqy p"htq o"Kpflc"*T flk mc" ("Uejpgkfgt"4226."Pku jkmcyc" ("Ukmgu"422 : +0"Qnfgt"
literature (e.g. Portevin 1920, 1926, Hatch 1928) mostly provides imprecise data on species' distribution. Concrete records are scattered in more recent publications (Schawaller 1981, 3 : ; 4."T flk mc"gv"cn0"4222."T flk mc" ("Uejpgkfgt"4224."4225."Pku jkmcyc" ("Ukmgu"422 : +."cpf" o qtg"eq o rnvgt"tgxkg yu"ctg"cxckncdng"qpn{"hqt"qpg"uwd i gpwu"*T flk mc" ("Uejpgkfgt"4233+"cpf" a single species group (Sikes et al. 2006).

The present paper provides additional records for eight species of carrion beetles, with vyq"Pketqr j qtkpcg"cpf"qpg"Uknr jkpcg"urgekqu"tgrqvtgf"lqt"vjg"Łtuw"vk o g"htq o"Kpflc0"Vjg"fkutribution of *Thanatophilus minutus* Kraatz, 1876, a species rarely represented in collections, is summarised.

OCVGTKCN"CPF" OGVJQFU

Specimens examined are deposited in the following museums and private collections (acronyms according to Ctpgv"gv"cn0"3 : ; 5+<

BMNH – Natural History Museum, London, England (M. V. L. Barclay);

FWDE" " ó"Kpukvwyg"qh"U{ug o cvke"Diknqi {"Wpkxgtukv{"qh"Fcw i cxrknu."Fcw i cxrknu."Ncvxlc"*C0"Ujcxtkp=

JCOC – private collection of Jonathan Cooter, Hereford, England;

LTWE" " ó"rtkxcvg"eqmgevkqp"qh"Lcp" T flk mc."Rtcj c."E|gej" Tgrwdnke=

JSCC – private collection of Jan Schneider, Praha, Czech Republic;

OPJP" 6°Owu²w o "pcvkqpcn" f0 J kuvqktg"pcwvtgmg."Rctku."Htcepg" *C | c f g j "Vc i j c x k c p =
 NSMT – National Science Museum, Tokyo, Japan (S. Nomura);
 OUMNH – Oxford University Museum of Natural History, Oxford, England (D. J. Mann);
 YDCE" 6°r t l x c v g " e q m g e v k q p " q h " Y q n h i c p i " D e t t k g u . " Y k g p . " C w u v t k c =
 ZSM – Zoologische Staatssammlung München, Germany (M. Balke).

Cm" o c v g t k c n " y c u " k f g p v k l g f " q t " t g x k u g f " d { " L 0 " T f l k m c " q t " L 0 " U e j p g k f g t " * o c t m g f " c u " L T " q t " L U " k p " o c v g t k c n " u g e v k q p u " h w t v j g t " k p " v j g " v g z v + 0 " F k u v t k d w k q p " o c r u " y g t g " r t q f w e g f " c p f " g f k v g f " k p " G U T K " C t e O c r " ; 0 5 " q h " C t e I K U " F g u m v q r " ; 0 5 " u w k v g 0 " H q t " o c r " n c { g t u . " h t g g " e x c l m c d n g " n g x g n " 2 " c p f " n g x g n " 3 " f c v c " h t q o " I n q d c n " C f o k p k u v t c v k x g " C t g c u " * j v w r < l l y y y 0 i c f o 0 q t i l y q t n f + " y g t g " w u g f 0

RESULTS

Nicrophorus encaustus "Hekt o cktg." 3 : 8

Nicrophorus encaustus Fairmaire, 1896: 82 (description, type locality "Simla")

Material examined. India: *Jammu and Kashmir* < " P G " U t k p c i c t . " U q p c o c t i "] e c 0 " 4 6 Å 3 9 P " 2 9 7 Å 3 9 G . " 4 8 2 2 6 4 : 2 2 " o . " 3 0 6 9 0 x k k k 0 4 2 2 6 . " R w e j p g t " n g i 0 . " L U " f g v 0 . " 3 " (J S C C) ; S r i n a g a r – G r e a t J k o c n c { c " T c p i g . " F c m u w p " g p x 0 "] p q " n q e c v g f _ . " 4 6 2 2 6 4 7 2 2 " o . " 4 9 0 x k k 0 6 3 3 0 x k k k 0 4 2 2 6 . " R w e j p g t " l e g . , J S d e t . , 1 (J S C C) .

Fkuvtkdwwkqp Rare species, known only from northern India (Jammu and Kashmir, Himachal Pradesh, Uttarkhand) and Nepal (Sikes 2002).

Nicrophorus melissae "Ukmgv" "Ocf ig." 4228

Nicrophorus melissae Sikes et Madge in Sikes et al., 2006: 344 (description, distribution; type locality "Nepal: Ganesh Himal, 7 km W Godlang, 2950 m")

Material examined. India: *Arunachal Pradesh* < " V c y c p i " O q p c u v g t { " g p x 0 . " 4 9 Å 5 7 5 2 P " ; 3 Å 7 3 2 2 G . " 4 9 2 2 6 5 2 2 2 " o . " 3 ; 0 6 4 9 0 x 0 4 2 2 6 . " N 0 " F g o d k e m " n g i 0 . " L U " f g v 0 . " 3 " (J S C C) .

Fkuvtkdwwkqp Tgegpvn { " f g u e t k d g f " h t q o " P g r c n " c p f " D j w v c p " * U k m g u " g v " c n 0 " 4 2 2 8 + . " Ł t u v " t g e q t f " from India.

Nicrophorus trumboi "Ukmgv" "Ocf ig." 4228

Nicrophorus trumboi Sikes et Madge in Sikes et al., 2006: 358 (description, distribution; type locality "Nepal, Solo Khumbu Dist., Mtns east of Lukla, 2840–2900 m")

Material examined. India: *Sikkim* < " Y g u v " U k m m k o " f k u v t k e v . " M c p i e j p g f | q p i c "] ? " M c p e j g p l w p i c _ " c t g c . " E j q m c "] ? " D c m j k o . " e c 0 " 4 9 Å 4 5 P " 2 : : Å 3 2 G _ . " 5 2 7 2 " o . " 4 7 0 k z 0 3 ; : 5 . " U 0 " W 2 p q " n g i 0 . " L T " f g v 0 . " 1 (N S M T) .

Fkuvtkdwwkqp Tgegpvn { " f g u e t k d g f " h t q o " P g r c n " c p f " D j w v c p " * U k m g u " g v " c n 0 " 4 2 2 8 + . " Ł t u v " t g e q t f " from India.

Nicrophorus nepalensis "J qrg." 3 : 53

Nicrophorus nepalensis Hope, 1831: 21 (description; type locality "Nepaul")

Material examined. India: *Arunachal Pradesh* < " 2 0 5 " m o " U U G " q h " F k t c p i . " 4 9 Å 4 2 5 4 P " 2 ; 4 Å 3 8 3 9 G . " 3 7 7 2 " o . " 4 9 0 k x 0 6 3 0 x 0 4 2 2 : . " J 0 " R q f u m c n u m " a " (" R 0 " T M " r g m " n g i 0 . " d c k v g f " r k v h e n n " v t c r u " * t q w g p " Ł u j + . " q p " q r g p " l " u r c t u g " x g i g v e v k q p . " f t { " u n q r g . " L T " f g v 0 . : " , 8 (J R U C) ; *Himachal Pradesh* < " O c p c n k . " t q c f " v q " N g j . " 5 4 Å 3 8 4 7 0 9 P " 2 9 9 Å 3 3 4 5 0 8 G . " 4 2 3 7 " o . " 3 2 0 x k k 0 4 2 2 6 . " O 0 " W j g t " l e g . , J R d e t . , 1 " * Y D C E + 0

Fkuvtkdwwkqp Widely distributed from Pakistan, India, China, Myanmar, Laos, Thailand,

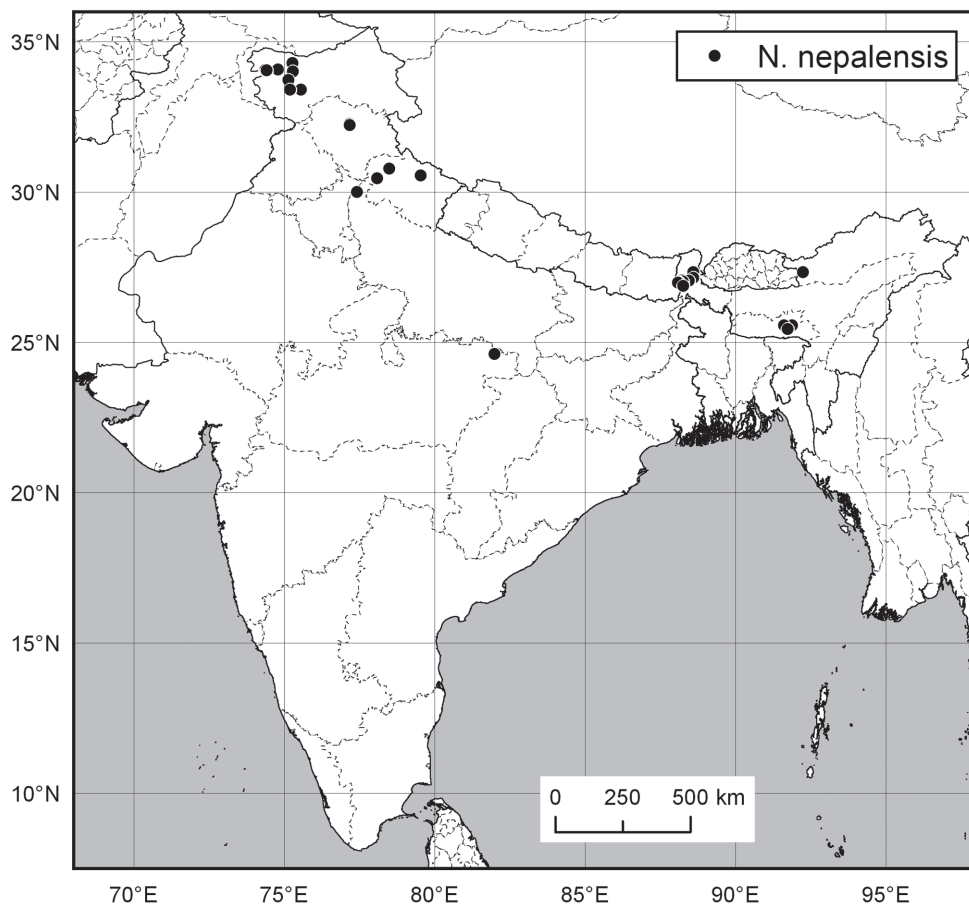


Fig. 1. Known distribution of *Nicrophorus nepalensis* Hope in India.
 Qdtl'30' \p' o 2' tq | -¶ gp' f twjw' *Nicrophorus nepalensis* Hope v Indii.

Malaysia, Cambodia, Vietnam, Philippines to Japan (Ryuku Islands) (Sikes et al. 2006, Nishikawa & Sikes 2008). In India known from Jammu and Kashmir (Schawaller 1982, T flk mc" ("Uejpgkfgt"4224."Ukmgugv"cnl"4228+."Jkocejcn"Rtcfguj"*Pkujkmcyc" ("Ukmgug"422: +." Uttarakhand (Schawaller 1982, Sikes et al. 2006), Madhya Pradesh (Sikes et al. 2006), West Bengal (Schawaller 1982, Sikes et al. 2006, Nishikawa & Sikes 2008), Sikkim (Sikes et al. 4228+"cpf"Ogi jnc {c"*T flk mc"gv"cnl"4222."Ukmgugv"cnl"4228+)"Hktuv"tgeqtf"htqo" Ctwpejcn" Pradesh; known distribution in India is summarized in Fig. 1.

Necrophila (Deutosilpha) twlvjqtcz" * Ykgfg o cpp."3:45+

Uknrjc"twlvjqtcz Wiedemann, 1823: 71 (description, type locality "Bengalia")

Material examined. India: *Uttarkhand* "nghv'ukfg"qh" Mquk'tkxgt."7"mo" P" Tcopic t" jec l"4; Å48 P" 9; Å2: G_."906330xk04233."C0" Cpkujejgpmq"ngi0."wpfgt'ecttkqp"qh" *Semnopithecus entellus*, JR det., 2 specimens (DUBS).

Bionomy. "Oquv" j kuvqtkecn" o cvgtkcn" gzc o kpgf" fkf" pqv" i kxg" eqnngvki" ekteu o uvcpegu" *T flk mc" & Schneider 2011: 9). This record under the carrion of the langur *Semnopithecus entellus* *Fwhtgupp."39; 9+*Rtk o cvgu<Egteqrkvj gekfcg+"eqpŁt o u" c" pgetqr j c i qwu" cuuqekcvkqp" qh" *Necrophila* (*Deutosilpha*) *twŁvjqtcz* (Wiedemann, 1823) with large mammals.
Fkvtkdwvkkp" Mpqyp" htq o " Kp fkc." Pgrcn" cpf" Utk" Ncpmc" *T flk mc" ("Uejpgkfgt"4233+0

***Thanatophilus dentiger*"*Ug o gpqx."3; ;2+**

Silpha (*Thanatophilus*) *dentiger*" Ug o gpqx."3; ; 2<525"*fguetkrvkp."v{ rg" nqecnk v" ðV jkdgv" ugrv/|qf.|" o qpvgu" C o fq" ektec" o qpceui" Rcdqt/vcuu{ "pge" pqp" c" f" I wx|" Vcuj kvwö+

Material examined. India: *Uttarakhand*"3; ;m o "P" Ocpfcn{"?]"Mcpfck"*A+_" Ycp"]?"Xcp."ec0" 52Å34 P"29; Å59 G_."4922" o."4: 0kx0640x04228."G0" Mw gtc" ngi0."LU" fgv0."4" , 4 (JSCC).

Fkvtkdwvkkp" Known from Pakistan, China (Xizang autonomous district, Qinghai, Sichuan cpf" [wppcp" rtqxkpegu+." Pgrcn" cpf" Kp fkc" *Uejcycmgt"3; ; 3."3; ; 4." T flk mc" ("Uejpgkfgt"4224." Nishikawa & Sikes 2008), and, with uncertainty, also from Tajikistan (Nikolaev & Kozminykh 4224+0" Htq o " Kp fkc" tgrqvtgf" htq o " Jk o ce jcn" Rtcfguj" *Uejcycmgt"3; ; 3." T flk mc" ("Uejpgkfgt" 4224+ "cpf" Wwvctm jcpf" *cu" Wwvct" Rtcfguj." T flk mc" ("Uejpgkfgt"4224+." vjg" hcwgt" ku" dcugf" qpn{" "qp" v y q" qnf." k o rtgekug" tgeqtfu" htq o " I qtk" T kxgt" I qti g"]?" Ljct" Xcmg{"."ec0" 52Å58 P"2: 2Å2; G_0

***Thanatophilus minutus*"Mtccv|.3:98**

Thanatophilus minutus Kraatz, 1876: 374 (description, type locality "Thibet")

Material examined. India: *Himachal Pradesh*" U k o nc"]?" U j k o nc." ec0" 53Å27 P"299Å32 G_." iv.–vi.1896, without collector's name, ex coll. R. Oberthur, JR det., 1 (MNHN); same data, vii.1896, JR det., 1 (MNHN); *Uttarakhand*" Ncpfqwt" Jec0" 52Å4: P"29: Å28 G_." ykvjqwv" fcvg." Benson leg., in carcasses, JR det., 1 *QWO P J += "Fg j tcfwp" Jec0" 52Å3; P"29: Å24 G_." z03; 66." without collector's name, JR det., 1 (ZSM); same data, xi.1944, JR det., 2 , 1 (ZSM); same data, i.1945, JR det., 3 , 2 (ZSM); same data, JR det., 1 , 1 (JRUC); 19 km P" Ocpfcn{"?]"Mcpfck"*A+_" Ycp"]?"Xcp."ec0" 52Å34 P"29; Å59 G_."4922" o."4: 0kx0640x04228." G0" Mw gtc" ngi0."LT" fgv0."3" (BMNH); same data, JS det., 2 (JSCC); *Madhya Pradesh*: Xkpfj {c" Jknu" Jegpvtqkf" ec0" 46Å59 P"2: 4Å22 G_."3; 43." ykvjqwv" eqnngvqtou" pc o g."gz" eqnm0" T0" Oberthur, JR det., 2 (MNHN); (*imprecise records*+<" Y" Cn o qtc" Fp0." Mw o cqp" J f k x k u k q p_." v.1912, H. G. Champion leg., JR det., 1 *DOP J += "ðkpfkcö." ykvjqwv" fcvg." Jgcdug{" Jngi0_." JR det., 1 , 2 *QWO P J += "ðUc jpgö" Jpqv" kpvgt r tgvf_." ykvjqwv" fcvg."LT" fgv0."4" , 1 (OUMNH); same data, JR det., 1 *LTWE+= ykvjqwv" fcvg." Ecrvp0" Dq{u" Jngi0_."LT" fgv0."3" *QWO P J += "ðkpfkc" Qtkgpw0." ykvjqwv" fcvg" Jdwv" dghqtg"3; 27_." ykvjqwv" eqnngvqtou" pc o g."gz" coll. Fry, JR det., 2 (BMNH).

Fkvtkdwvkkp" Tctg" urgekgu." mpqyp" htq o " Chi j c p k u v c p" *ukp ing" tgeqt f" htq o " Mcdwn" r cuu." Nikolaev & Kozminykh 2002), China: "Thibet" (only imprecise record – Kraatz 1876, Hatch 3; 4: + "cpf" Kp fkc0" Htq o " Kp fkc" tgrqvtgf" htq o " Jk o ce jcn" Rtcfguj" *Mwnw"]?" Mwnnw."ec0" 53Å79 P" 299Å29 G_." *Rqtvgxkp"3; 48+." U k o nc" *T flk mc" ("Uejpgkfgt"4224+*"ekvgf"cu" ðRwplcd0" d {c" Jcvej" 3; 4: +."Urkvk" Jec0" 54Å36 P"29: Å24 G_." *T flk mc" ("Uejpgkfgt"4224+ "Wwvctm jcpf" *Dc f c t k p c v j" gpx0" Jec0" 52Å63 P"29; Å52 G_." *T flk mc" ("Uejpgkfgt"4224+ "Ocf j {c" Rtcfguj" *Xkpf j {c" Jknu" *T flk mc" ("Uejpgkfgt"4225+ "Ukmmk o" Jegpvtqkf" ec0" 49Å53 P"2: : Å53 G_." *Rqtvgxkp"3; 42+ "cpf" ðCuuc o ö" Jegpvtqkf" qh" pqy c f c {u" Cuuc o" ec0" 48Å34 P"2; 4Å78 G_." *Rqtvgxkp"3; 42." Jcvej"3; 4: ." T flk mc" ("Uejpgkfgt"4225+0" C f f k v k q p c n" tgeqt fu" htq o " Kp fkc" =mpqyp" fkvtkdwvkkp" kp" Kp fkc" ku" summarized in Fig. 2.

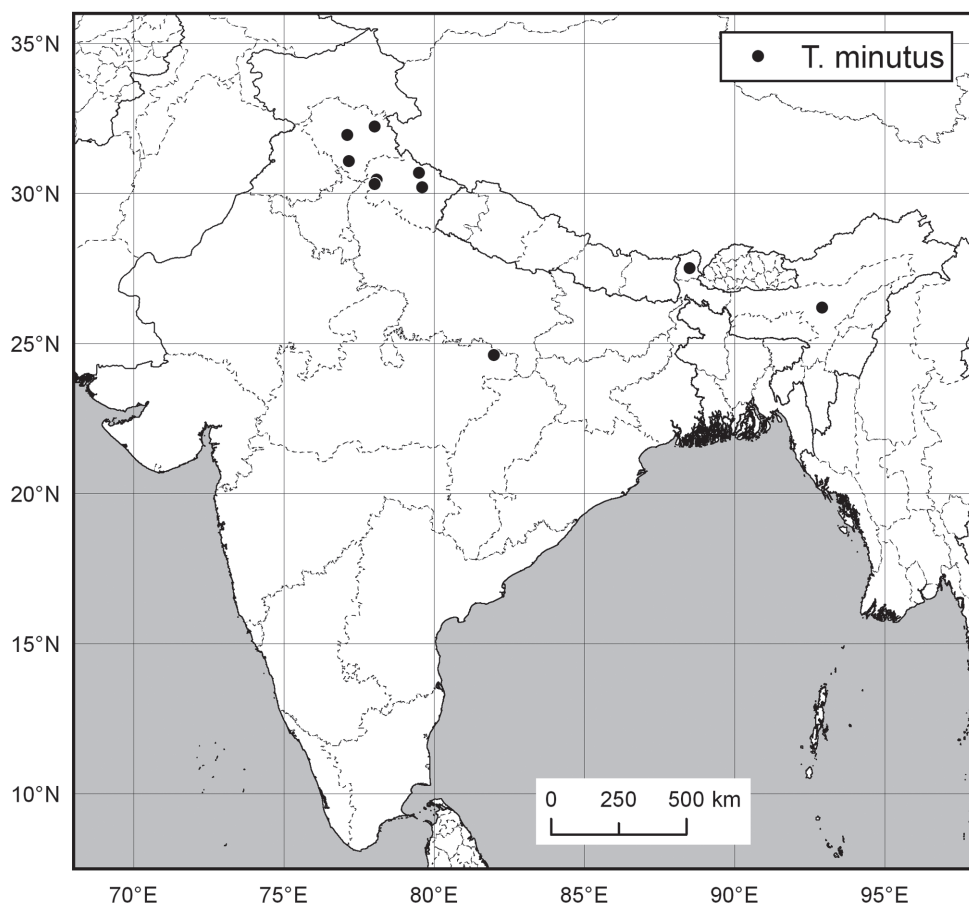


Fig. 2. Known distribution of *Thanatophilus minutus*. The dots represent state centroids only.

Qdtt\40\p o 2 tq | -f gp f tw jw *Thanatophilus minutus* Kraatz v Indii. Obecné údaje ze Sikkimu a Ásámu reprezentují lgp'egpvtqkf {"qdqw"uv v 0

Thanatophilus porrectus Ug o gpqx. 3: ; 2+

Silpha (Thanatophilus) porrecta Ug o gpqx. 3: ; 2<523* fguetkrvkp. v { r g n q e c n v { ö V w t m g u v p e j k p g p u l . c f t w x l R c e j r w p g e p q p c r w f w t d g o R q m ö + u c o g f c v c . L U f g v l . 5 " . 6 " * L U E E + 0

Material examined. India: *Jammu and Kashmir:* W Sumda Chenmo, Drogulika mountain rcuvtwtg]ec 56 Å 2: P 299 Å 28 G. "6322" o "330kz0422; .M0/Mtcwug'ng i 0. LT" fgv l. "3" , 1 (JCOC); same data, JR det., 1 (JRUC); same data, JS det., 3 , 4 (JSCC).

Fkuvtkdvwkpp l" Ykfgn { " f k u v t k d w g f " d w v u e c t e g ' u r g e k g u . m p q y p ' h t q o " C t o g p k c . W | d g m k u v p . C h i j c - n i s t a n , P a k i s t a n , T a j i k i s t a n , K y r g h y z s t a n , C h i n a (X i z a n g a u t o n o m o u s r e g i o n a n d Q i n g h a i r t q x k p e g + c p f " T w u u k " * H e t " G c u v + * U e j c y c n n g t " 3 ; : 3 . T f l k m c " (" U e j p g k f g t " 3 ; ; 8 . " 4 2 2 4 . " 4 2 2 6 . " N i k o l a e v & K o z m i n y k h 2 0 0 2 , N i s h i k a w a 2 0 1 1) . F i r s t r e c o r d f r o m I n d i a .

SOUHRN

Rt^aeg^awx^af^aÀfclg^aq^atq|-^agp^aquok^aftwj "otejqftqvwqxkv ej"dtqwm "*Eqngqrvgtc<"Ukn-rjkfcg+|"Kp^afk^ag^a"Jtqdc ^aek^a"*Nicrophorus melissae* Sikes et Madge, 2006 a *N. trumboi* Sikes et Madge, 2006, známí zatím pouze z Nepálu a Bhútánu (Sikes et al. 2006), jsou uvedeni rtqrtx²"k^a|"Kp^afk^ag^a|"À|g^ao^a¶Ctwp^a c^anrctf²-g^a."t^agur⁰"Ukmmk^aow⁰"Otejqftqvw"*Thanatophilus porrectus*"*Ugogp^aqx."3:;3+."tq|-^agp "qf"Cto²p^akg^arq^aF^anp "x ejqf"Twumc"*Uejcycngt³;:3."T flk mc" ("Uejpgkfgt³;:8."4224."4226."Pkmqncgx" ("Mq|okp{mj"4224+."lg^awxgfgp^arqrtx²"k^a|"Kp^afk^ag^a|"À|g^ao^a¶Fflico o^aÀ^ac^aMc-o^a¶tw⁰"Ftwj"*Nicrophorus nepalensis* Hope, 1831 je poprvé j^an^a-gp^a|"Ctwp^a c^anrctf²-g⁰Ujtpwvq^alg^atq|-^agp^afxq^aftwj "x^aKp^afk^a."jtqdc ¶mc"*N. nepalensis* c^axg^aud^a¶tm^aej^ax^a|^aep "|cuvqwr^agp²j^aq^aotejqftqvw"*Thanatophilus minutus* Kraatz, 1876; známé p^ang|{"qdq^aftwj "x^aKp^afk^aluq^a|p^a|qtp p{"pc^auejgocvkem ej"ocr^aej"*qdt⁰3."4+⁰Wxgfgp{"luq^aw^ak^afc^a-¶tgeg^apv^a¶Àfclg^aq^ajtqdc ¶mqx^aftwjw"*Nicrophorus encaustus* Fairmaire, 1896 z území Fflico o^aÀ^ac^aMc-o^a¶tw^ac^aq^aotejqftqvw"*Thanatophilus dentiger* (Semenov, 1890) z Uttarákhandu *f ¶xg^apc| xcp²j^aq^aWwct^a c^an^a k^aWwct^artcf²-+0

Mqogp^avx^ap^alg^avcm²p^ang| "otejqftqvw"*Necrophila (Deutosilpha) twŁvjqtcz* (Wiedemann, 1823) pod mršinou hulmana posvátného (*Semnopithecus entellus* (Dufresne, 1797)) |Wwct^am^ajcp^afw."mygt "rqvxt |wlg^apgmtq^ah^aip^a|"r uq^ad^aflkxq^avc^avq^ajq^aftwjw"dtqwmc^apc^axgnm ej" ot-kp^aej^aucxe 0