

7KLV DUWLFOH LV UHSULQWHG RQ WKH &DUWHU &HQWHU V ZHEVLWH Z  
0HGLFLQH DQG +\JLHQH

\$P - 7URS OHG +\J SS  
GRL DMWPK  
&RS\ULJKW [7KH \\$PHULFDQ 6RFLHW\ RI 7URSLFDO 0HGLFLQH DQG +\JLHQH](#)

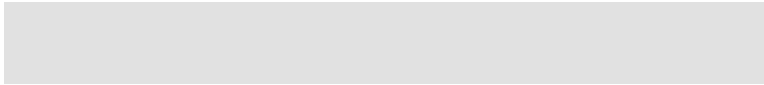
## CASE-REPORT

Emergence of 2 QFKRFHUF From Skin Mincing  
'UDFXQFXOLDVLV PHGLQHQLV

Mark L. Eberhard 0.11.24 of H[(3(e)7(alth/G)Mahana0 41He)4(alth)C005-361.24 -11.52 Dracunculus medinensis Q I H E @ LZR  
ZRUP UHFRYHUHG ZDV LGHQWLILHG DV

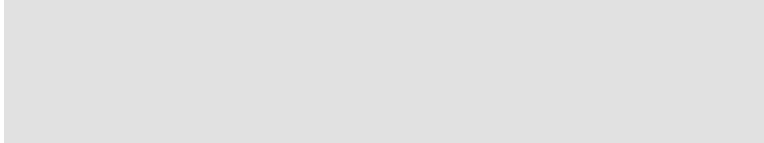
\*XLQHD ZRUP GLVH7KDYHUE SRIQWU6 FMDYHOG/ DQG IXUWKH  
SURYIXGJWKHU LQVLJKW LQWR WKH ELRDRS OIRF DRVLFKRV HIRU L\*  
ZRUP HUDGLFDWLRQ SURJUDPV

(OHYHQ DGGLWLRQDO V.SHWLsKDYH UHIBIOLHYHOG G KQJQJ ±  
7KHVH VSHFLPHQVE DHHJKWSEJHWHHQQWLRP \*KDQD RQH LQ  
DQG WZR LQ DQG RQH HDFK IURP BQDQGDVH G ,Y&I  
6HYHQ RI WKH FDVHV ZHUH



), \* 85( &DPHURRQLDQ ZRPDQ IUI  
Onchocerca volvulus HPDOH ZRUP ZDV U  
KHHO RI AWK, PDJR W V GUHVVLQJ  
B , PDJH RI ZRUP EHLQJ H[WUDF  
7KLV ILJXUH DSSZDZUMLVQPKROR.

View larger version .  
[>LQ D QHZ ZL](#)



:KHQ H[DPLQHG XQG HU D PLFURVFRS K D WWWZDWH PPHVSHFWPH  
QRW \*XLQHD ZRUPH DDVQ @ WLG H QZVLUH HIGS ENFIDXP DOR I WKH GLV  
QDWXUH RI )WJKXU FIX WHL FFXHWL FODV RUSKIDP DFKH DUDFWHULVWLF IH  
LQFOXGLQJ H[W H M Q DDJ R X G CHW KWK DRG\ DQG LQWHUQDO ED  
GLIIHUHQW VSHFLHV KDYH GLVWDOG WXPHE HUL JRI DQQVMSQ BQQ  
ULGJH Onchocerca volvulus W KHUHWZR VWULDH SHU ULGJH RQH XQG HU DG

\$ FRQVSLFXRXV IHDWXUHORvbiwixsP DQK HL Q RHUPVDLRLQ Q LRM KV X E F X V  
QRGXOHV LQ ZKZRKJ FVR IPDN GE HD GXOPR QVWUDWHG 7KH SDUDV  
GHVFULEHG LQ E\ /HXFNDUW DU S PI UVRGX O G V \* KDOGDH U' HWKSH  
ZHOO GRFXPHQWHGL R WRXORUJH Q FHS S IDUDQFH RI VXFK QRGXC  
QRGXOHV PD\ RFFXU LQ GHHS W LQRMUIS D FODHGL Q R W DEXWKRWDQ/L  
QRWHG RU VSHRFXQDWHG FRQRW D G XOW ZRUPV QRW EHLQJ HG  
ORKDPPHG VSHFXODWHG WKDW DRGXOSRQRUP DWRLB QDZFDWL SQ  
GHJHQHUDWLQJ ZRIULPQ/MXUA DV R HWKXO WRUP DQ H[SODQDWR  
SUHVHQW RYHU E-RQ L S URPHL RUI Q G FWDN Q RLW W R I HFF FRRX QW WKI  
\RXQJ IHPDOH ZRUP E VFDUQ IRGWLHQ QERHGXOHV +RZHYWU D W W LV  
QRGXOHV FDQ EH SDOSDWHG LQ IHZHU FV K L D G U H Q R I Z B W Q JDP  
SUHVXPHG \RXQJHU SRS XOKDWWL R Q L R I S R S R U W E L X W Q L Q F U H D V  
PLFURILOD S I H U S R Q V V P R Y H W K D Q \ H D U V R I D J H

:RUWK QRWLQJ EXW RI XQFHUWDLQQY D O X M E D W H K D H U D I O D Z H  
DQG WKDW PRV W D D S U H D E M G W R X Q H E D V H G R Q R U J M K H R Z H Y  
VSHFLPHQV FRQWDLQH G P L F P D R W I X O D U L D R H Q L D G G F F D W H L Q J W K D G  
ZLWKRXW W R H D R O P R O X L R Q % D V H G R Q S H U V R Q D V K H R E V H U Y D W  
ZRUNLQJ LQ WKH ILHOG RI R Q F I Q R R G K O F L D V I J W L D Q G W W H I G D Q D S  
SURJUDPV R S U R W R R F B O F K L W V H H P V Q H D U O \ L P S I R R V I H E O H G W G  
WKH SUHVHQW F D V H V Z H U H Q R G W O B I O D Q G F R V K W D L Q R I G H Z R W K L H  
WKDW QR G A K I O H F R X X U L Q H J R I H [ W U D F W L R Q

8QIRUWXQDWHO\ DGGLWLRQDO L Q Q R G F D W L R Q O R Q E H W K B M A X F O  
:H EHOLHYH WKDFW D P D Q P B I W B Y H F R P H I U R P D U H D V U H F H L Y  
SDUW RI PDVV GUXJ DGPLQLVWUDW W R R Q V X U S J H F D P G U X X W Q H D  
FDXVH RI ZRUP H S S I X O V H L Q R Q F L D V W K H D Q G Z H G R Q R W V X V S H F V  
ZLWK QRGXOH IRUPDWLRQ DQG W R H W H Q R R G H X O H F F R X O D M B G R R L  
L I D R I W K H S I Z U K R R Q W K I H V R P Z R U P V Z H U H H [ W U D F W L H G G K D G  
WKH VNLQ LQGLFDWLQJ WKH S Z R H U P H V Q F R H J R Z I K R I W W K I H W D Q G I S D I O  
QRGXOHV ZHUH S H U F D I Q Q R W / D V W O L W K D Q \ F H U W D L Q W \ Z K H W  
IRUPDWLRQ RI WKH VNLQ OHVLRQ W R G H R I S U H Q L Q R J V Z K B W K H Q D  
FDVHV D \* X L Q H D R Z R U R S I R O X L Q W R H H D Q R W K H U K H D O W K Z R U N I  
KLPVHOI RU KHUVHOI VFUDWFKHG I R V V R N W W I K H R V N K Q Z Q Q F K F V  
HPHUUJHG +RZHYH V H Y L Q U D O L S R U L Q J D V G D Q E H P D G H Q R M H P D Q  
KDYH FHUWDLQ KDOOPDUN I H Z R V X P J G V V R I D D V H V U X K H B B V Z D R I Q \* R  
D F O D V V D J E J X O I H V W H F D X V H P D r a c u n d u s Z H R P O V H V H F U H D W H R U U H O H  
V X E V W D Q F H W K D W F U H D W H V W Z R U I R W F D W L Y R I Q \ R H I P W K H J H E O I L V M  
H Q V X L Q J O H V L R Q W K Z H F R X Q B H S W D Q G W W H U P L Q R O R J \ E R I W D I Z I R ' U  
Z R U V W T # p  
@A



),\*85( \*XLQHD ZRUP OHVLRQ IURP  
XWHULQH WXEH LV SURWUXGLQJ  
WUDQVSDUHQW DSSHDUDQRH DWKL  
ZZZ DMWPK RUJ

View larger version

>LQ D QHZ Z

\$OWKRXJK WKH SUHVHQWDWLRQ RIIRZURKRPDWKRQRFKR FMKIFLDM  
H[SHULHQFH LW ILQFEHLDQJLQHCSR BWHHG WKH SDVW WKIEVGH E  
SUHVHQWDWLRQ LV FDXVHG E\ WZRUH BHFUMHDMHQ JDLOF IZGNQV  
OXPSHG ZLWKLQ DWKDWRGIPWHVWKDWDQPHUJHG IURP WKH VNLQ  
ZRUPV :LWK WKH KHLJKWHQHG LQWIDWIDVADVGVGRFXRHOVDC  
GLVHDSVH WR VXSSUHQWNSUNSDVLRQGRDWWXNDQVPLVVLRQ WK  
RQFKRFHFDQNLZALWVQNZEHUFRHGLQDWR RSDUDVAFQWLRQ FV

QRGXOHV :H DUH QRLW KHEW HR IWRKDI G B UTHXHW WLRQV RWKHU V  
GRFXPHQWHG RFFXUUHQFH RI WKH FDVUHWJ D R G V QS UZKYDLG HP D  
PD\ QRW EH DQ XQXVXDO DVSHFW RI RQFKRFHUFLDVLV

5HFHLYHG \$XJXVW

\$FFHSWHG IRU SXEOLFDWLRQ 6HSWHPEHU

\$ & . 1 2 : / ( ' \* 0 ( 1 7 6

:H WKDQN DOO 0LQLVWU\ RI +HD B WKG W K B Q W K W H J D Q H Q W H L U R Q D Q G D W K I R  
FROOD B Q W L W Q D Q V S R U W RI V S H F L P H Q V & R R O W B E R : U R D W I G Q J H S C Q W K H D U D D Q & J

\$XWKRUV DGGUHVHV 0DUN / (EVHUKDUG D Q G L O D L R D U R D 3 B H Q W L H W L F I R U  
3UHYH Q W O B Q W P O H P # F L G F ( U R Y H V W R 5 X L J 7 L E H Q G U B F W Q R X O 3 W R J L V D P 7 K H  
& H Q W H U \$ W O D E W X D L T W L # H P S R Q S U H G X 6 . R U N R U \* K D Q D \* X U B H W D : F R U P ( U D G  
\* K D Q D + H D O W K 6 H U Y L F H V H D P O X I R U K R Q B # K I P R D I O S R U J ' L Y L V L R Q R I ) R R  
: D W H U E R U Q H D Q G L V G D W U R Q B H Q W H O V I R U ' L V H D V H \* & R Q W U R O D Q G 3 U H Y  
V W U # F G B K I R O L S ' R Z Q V 1 H J O H F V U R G J U D I R S & F I D O V H L V H P W H Q W H U Q D W L R Q D C  
' H Y H O R S U P R X S V 5 7 , , Q W H U Q D W L R Q D C S G : B Z Q L Q U W R Q U ' & ( P D L O

\$GGUHV FRUUHVSRRGHQFH WR 0DU'N V H D E H V K D Q G 0 D L Y D M L B Q & F I Q 3 D H W D W  
& R Q W U R O D Q G D B O N W H R S W L R Q % X I R U G + L J K Z D \ 1 ( P S W O D Q W D \* \$  
PHEHUKDUG#FGF JRY

5 ( ) ( 5 ( 1 & ( 6

+RSNLQV '5 )RHJH :+ \* XScAnte 2ZRUP GLVHDTV

&HQWHUV IRU 'LVHDTV &RQWURO DQG 3UHYHQWLRQ  
GUDFXQFXOLDVL-XQ+D QMVRJ Morb Mortal Wkly Rep 58 ±  
>HGOLQH@

&HQWHUV IRU 'LVHDTV &RQWURO DQG 3UHYHQWLRQ  
ZZZ FGF JXLQHDZRUP UHV RYZZFHFVZJXLSQ M B ZRUP UHV RX  
XS JZ \$FFHVHVG 6HSWHPEHU

%LPL / )UHHPDQ \$5 (EHUKDUG 0/ 5XLJ 7LEHQ ( 3LHQL  
Dracunculus medinensis U R P insignis E\ WKH VHTXHQFH DQDO\VLV RI W  
J H A n Trop Med Parasit 99 ± > & U R V > : S H E I @ I 6 B D H G F H L @ H @

(EHUKDUG 0/ 0HOHPRNR \* =HH \$. :HLVVNRSI 0\* 5XL] 7  
0LVLGHQW IOnChFDeWLVRIQUS DIV JXLQHADn ZpUMe Parasito95  
± >&URV>:HEI@I 6EDHGDL@H@

\$OELH] (- %XWWQHU ': 'XNH %2 'LDJQRVLV DQG H  
RQFKRFHtopMedParasitoB9 ± >0HGOLQH@

'XNH %2 2QFKRFHUFLDVLV GHHS TansPScEXQGOHV F  
Trop Med Hyg64 ± >:HE RI 6EDHGDL@H@

0RKDPPHG \$6 &RQWULEXWLRQ WR WKH VWXG\ RI W  
RI KXPDQ DQG ERYLAOnTropMed Parasito25

9DQ GHQ %HUJKH / 5HFKHUFKHV VXU O RQFKRFHUF  
DGXOWHV HW OHXU O RAnSDoLdWMedTropFKH]±O KRPPH

%HFNHU & . \$GkOenMblOUs LDHH LAnVdcBnXMed  
Trop30 ± >0HGOLQH@

'XNH %2 7KH UHDS SHDUDQFH UDWH RI LQFUHDVH  
RI  
A¾.-R" ñ 4s•00