

**Appendix 1**

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REAL P0,MEAN,PROP,PROPI,A,B,C,D
2RMS,NEMP0,MLP0,SSDLP0,IMP0,SMP0,IMV,SMV
INTEGER NUMS(10)
READ(5,*)RMS,NEMP0,MLP0,SSDLP0,IMP0,IMV,SMV
P0=0.05
DO 100 ITIME=1,19
MEAN=EXP(IMP0+SMP0*(LOG(-1.0*(LOG(P0))))))
A=RMS*((1.0/NEMP0)+(((LOG(-1.0*(LOG(P0))))
2-MLP0)**2)/SSDLP0))
B=((SMP0**2)*(1.0-P0))/(P0*((LOG(P0))**2))
C=IMV*(MEAN**(SMV-2.0))
PROP=0.1
DO 50 I=1,10
PROPI=((LOG(PROP*MEAN+MEAN))/LOG(MEAN))-1.0
D=(PROPI*(LOG(MEAN)))**2
IF(D.GT.A)GOTO 10
NUMS(I)=999999
GOTO 20
10 NUMS(I)=IFIX((B+C)/(D-A))
20 PROP=PROP+0.1
50 CONTINUE
WRITE(6,90)P0,MEAN,NUMS
90 FORMAT(' ',F5.2,F8.3,I10,I8,8I5)
P0=P0+0.5
100 CONTINUE
STOP
END

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**MECHANICAL PENCILS FOR MICRODISSECTION**

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**Abstract**

Replacing the lead of a 'fine line' mechanical pencil with an entomological pin produces a convenient, adjustable probe for microdissection work.

The range of fine lead (0.5 mm) mechanical pencils currently on the market offer an excellent alternative to homemade handles for microdissection probes. Replacing the lead with an entomological pin of appropriate size results in a comfortable, well-balanced tool with a probe length which is readily adjustable to suit the user or application (Fig. 1).

The cheapest all-plastic leadholders may require up to a No. 5 pin for the chuck to grip adequately, but a moderately-priced pencil with a metal ferrule can grip a No. 2 or even No. 1 pin firmly. Because the pin is retractible (unless bent) probes may be handled easily and safely when not in use. It is not usually necessary to clip the head from the pin unless an extra long reach is desired.

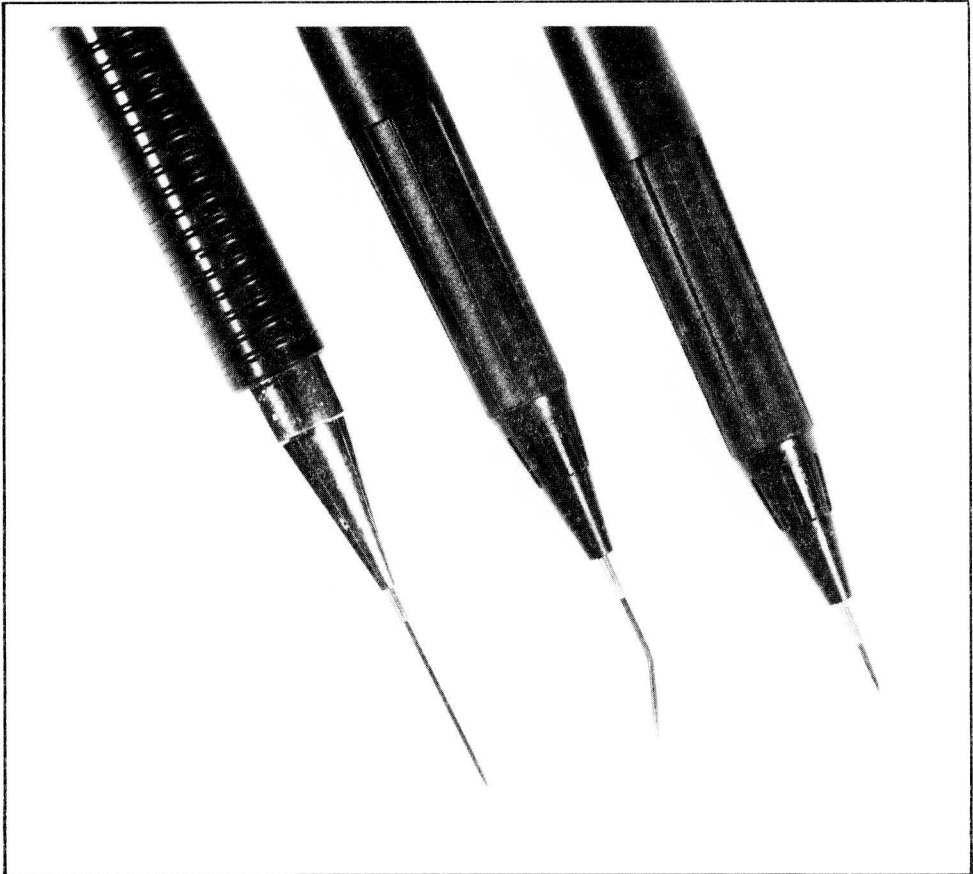


FIG. 1. Heads of three mechanical pencils with lead replaced by Nos. 1 (left) and 4 (middle and right) entomological pins. Left hand probe adjusted for long working length.

These probes have been used effectively at Simon Fraser University both by professional entomologists and undergraduate entomology students in laboratories requiring microdissection.

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