

**Title: Quarterly report of the Pennsylvania Board of  
Agriculture, no. 32-33**

**Place of Publication: Harrisburg, Pa.**

**Copyright Date: 1887**

**Master Negative Storage Number: MNS# PSt SNP aAg017.7**

W.F.  
2099.

32d and 33d

QUARTERLY REPORTS

OF THE

PENNSYLVANIA

BOARD OF AGRICULTURE.



HARRISBURG:

EDWIN K. MEYERS, STATE PRINTER.

1887.

E630.873

P3g

THIRTY-SECOND and THIRTY-THIRD  
**QUARTERLY REPORTS**  
 OF THE  
**PENNSYLVANIA BOARD OF AGRICULTURE.**

PENNSYLVANIA BOARD OF AGRICULTURE, 1887.

**Members Ex-Officio.**

Hon. James A. Beaver, *Governor.*  
 Hon. J. S. Africa, *Secretary of Internal Affairs.*  
 Dr. E. E. Higbee, *Superintendent of Public Instruction.*  
 Hon. J. B. Niles, *Auditor General.*  
 Dr. G. W. Atherton, *President of the Pennsylvania State College.*

**Appointed by the Governor.**

	Term expires.
Col. James Young, Middletown, Pa. . . . .	1888
Dr. John P. Edge, Downingtown, Pa., . . . . .	1889
Will B. Powell, Springboro', Pa., . . . . .	1890

**Elected by County Agricultural Societies.**

		Term expires.
Adams, . . . . .	I. Garrettson, . . . . .	Bigler, . . . . . 1888
Armstrong, . . . . .	Jos. Painter, . . . . .	Kittanning, . . . . . 1890
Beaver, . . . . .	A. L. McKibben, . . . . .	Green Garden, . . . . . 1890
Bedford, . . . . .	J. E. Noble, . . . . .	Waterside, . . . . . 1889
Berks, . . . . .	J. G. Zerr, . . . . .	Geiger's Mills, . . . . . 1889
Bucks, . . . . .	E. Reeder, . . . . .	New Hope, . . . . . 1890
Blair, . . . . .	J. D. Hicks, . . . . .	Altoona, . . . . . 1889
Bradford, . . . . .	H. L. Scott, . . . . .	Towanda, . . . . . 1889
Butler, . . . . .	H. M. Wise, . . . . .	Harmony, . . . . . 1888
Centre, . . . . .	E. W. Hale, . . . . .	Bellefonte, . . . . . 1888
Chester, . . . . .	Thomas J. Edge, . . . . .	Harrisburg, . . . . . 1890
Clinton, . . . . .	J. A. Herr, . . . . .	Cedar Springs, . . . . . 1890
Columbia, . . . . .	Chandlee Eves, . . . . .	Millville, . . . . . 1888
Crawford, . . . . .	M. W. Oliver, . . . . .	Conneautville, . . . . . 1889
Cumberland, . . . . .	C. H. Mullin, . . . . .	Mt. Holly Springs, . . . . . 1888
Dauphin, . . . . .	G. Hiester, . . . . .	Harrisburg, . . . . . 1888
Delaware, . . . . .	E. Harvey, . . . . .	Chester, . . . . . 1889
Erie, . . . . .	J. C. Thornton, . . . . .	Avonia, . . . . . 1889
Indiana, . . . . .	W. P. Gordon, . . . . .	Black Lick, . . . . . 1889
Jefferson, . . . . .	J. McCracken, Jr., . . . . .	Frostburg, . . . . . 1890
Juniata, . . . . .	D. Wilson, . . . . .	Port Royal, . . . . . 1888
Lackawanna, . . . . .	H. H. Colvin, . . . . .	Dalton, . . . . . 1888
Lancaster, . . . . .	H. M. Engle, . . . . .	Marietta, . . . . . 1889
Lebanon, . . . . .	C. R. Lantz, . . . . .	Lebanon, . . . . . 1888
Lehigh, . . . . .	J. P. Barnes, . . . . .	Allentown, . . . . . 1890
Luzerne, . . . . .	J. B. Smith, . . . . .	Kingston, . . . . . 1888
Lycoming, . . . . .	D. H. Foresman, . . . . .	Williamsport, . . . . . 1888
Mercer, . . . . .	R. McKee, . . . . .	Mercer, . . . . . 1890
Montgomery, . . . . .	H. W. Kratz, . . . . .	Trappe, . . . . . 1890
Montour, . . . . .	Thos. L. Clapp, . . . . .	Limestoneville, . . . . . 1889
Northampton, . . . . .	A. D. Shimer, . . . . .	Bethlehem, . . . . . 1888
Northumberland, . . . . .	John Hoffa, . . . . .	Milton, . . . . . 1890
Somerset, . . . . .	C. C. Musselman, . . . . .	Somerset, . . . . . 1889
Schuylkill, . . . . .		Hill's Grove, . . . . . 1888
Sullivan, . . . . .	L. B. Speaker, . . . . .	Montrose, . . . . . 1889
Susquehanna, . . . . .	R. S. Searle, . . . . .	Wellsboro', . . . . . 1889
Tioga, . . . . .	J. W. Mather, . . . . .	Lewisburg, . . . . . 1890
Union, . . . . .	J. A. Gundy, . . . . .	Oil City, . . . . . 1889
Venango, . . . . .	Wm. Gates, . . . . .	Sugar Grove, . . . . . 1889
Warren, . . . . .	F. R. Miller, . . . . .	Washington, . . . . . 1890
Washington, . . . . .	J. McDowell, . . . . .	Lake Como, . . . . . 1888
Wayne, . . . . .	N. F. Underwood, . . . . .	Vosburg, . . . . . 1888
Wyoming, . . . . .	N. G. Bunnell, . . . . .	York, . . . . . 1889
York, . . . . .	W. S. Roland, . . . . .	

E630.873  
P39

## QUARTERLY REPORT.

## OFFICIAL LIST.

*President.*Hon. James A. Beaver, (*ex-officio*.)*Vice Presidents.*

M. W. Oliver, Dr. J. P. Edge, N. F. Underwood.

*Executive Committee.*Hon. James A. Beaver, W. S. Roland, J. P. Barnes,  
C. C. Musselman, G. Hiester, J. A. Herr,  
E. Reeder, J. McDowell, T. J. Edge, (*ex-officio*.)*Advisory Committee.*W. S. Roland, J. P. Barnes, G. Hiester,  
Thos. J. Edge, (*ex-officio*.)*Secretary.*

Thos. J. Edge, Harrisburg.

*Botanist.*

Thos. Meehan, Germantown.

*Pomologist.*

E. Satterthwaite, Jenkintown.

*Chemist.*

Prof. F. A. Genth, University of Pennsylvania.

*Consulting Veterinary Surgeon.*

Prof. R. S. Huidekoper, University of Pennsylvania.

*Veterinary Surgeon.*

Dr. F. Bridge, V. S., West Philadelphia.

*Microscopists and Hygienists.*

Dr. H. Leffmann, Philadelphia, Prof. C. B. Cochran, West Chester.

*Entomologist.*

Prof. W. A. Buckhout, State College.

*Ornithologist.*

Dr. B. H. Warren, West Chester.

*Meteorologists.*

Prof. I. P. Osmond, State College, J. L. Heacock, Quakertown.

*Mineralogist.*

Prof. J. Willcox, Philadelphia.

*Geologist.*

Prof. J. P. Lesley, Philadelphia.

*Stenographer.*

Col. H. C. Demming, Harrisburg.

## MINUTES OF THE ANNUAL MEETING,

*Held at Harrisburg, commencing January 26, 1887.*

Board called to order at 9.30, A. M., by Vice President M. W. OLIVER in the chair.

Present, Hon. J. S. Africa, Dr. E. E. Higbee, Messrs. Atherton, Young, Dr. Edge, Garretson, Noble, Zerr, Scott, Brown, Eves, Oliver, Mullin, Hiester, Thornton, Wilson, Colvin, Engle, Lantz, Smith, Clapp, Musselman, Searle, Gates, Bunnell, Underwood, Roland, and Secretary.

The SECRETARY announced that the terms of office of one-third of the members of the Board expired previous to this meeting, and that from this cause their names were not called; nearly all of them had been re-elected and were present, and after the presentation of their credentials, would take part in the work of the meeting.

The CHAIR named Messrs. Barnes, Gates, and Musselman a committee to receive and report upon the credentials of members-elect and delegates.

On motion, a recess was taken until the Committee on Credentials were ready to report.

Committee on Credentials reported that Messrs. Painter of Armstrong, Reeder of Bucks, Edge (T. J.) of Chester, McCracken of Jefferson, Barnes of Lehigh, McKee of Mercer, Hoffa of Northumberland, Gundy of Union, McDowell of Washington, Kratz of Montgomery, presented credentials showing that they had been properly appointed by their respective county agricultural societies to represent them in the Board.

The committee also reported that a certificate for Mr. Keller of Schuylkill was not in proper form, and, after discussion, the Secretary was directed to return it and furnish a proper blank.

The Committee further reported the following delegates as present with proper certificates:

*East Lynn Grange, P. of H., No. 271.*—Pennock E. Leonard, C. F. Wickersham.

*Grange No. 353, (Huntington county.)*—Miles Henderson.

*Middletown Grange, No. 684.*—Allen Tomlinson, John Wildman.

*Fulton Grange, No. 66.*—J. G. McSparran.

*Clarion County Pomona Grange.*—Henry Cyphert.

*Brandywine Grange, No. 60.*—S. R. Downing.

*Goshen Grange, No. 121.*—Dr. B. H. Warren.

*Huntingdon County Ponomo Grange.*—A. P. White.

*State Horticultural Association.*—John C. Hepler, H. S. Rupp, H. C. Snively, and Col. George F. McFarland.

*Berks County Agricultural Society.*—George D. Stitzel, Tobias Barto, Joseph F. Moore.

*Pennsylvania Forestry Association.*—C. C. Binney and Hon. J. Hess.

*Lancaster County Agricultural and Horticultural Society.*—Calvin Cooper, John H. Landis, Johnson Miller, W. H. Brosius.

*Farmers' Protective Association of Philadelphia*—E. Satterthwaite, S. N. Roland, I. P. Thomas, and Jesse Wilson.

*Chester County Agricultural Society*—Alfred Sharpless, B. H. Warren.

*Columbia County Agricultural Society*—H. V. White.

*Solebury Farmers' Club*—Asher Mattison, H. W. Rice, W. M. Ely.

On motion, the Board then proceeded to the election of officers for the coming year, and as tellers the CHAIR named Messrs. Scott, Gundy, and Zerr.

Messrs. Reeder, Underwood, Herr, Oliver, Dr. Edge, and Searle were then nominated for the positions of vice presidents. The tellers announced that Messrs. Oliver, Edge, and Underwood had been elected by the first ballot.

Messrs. Reeder, Musselman, Herr, Hiester, Roland, McDowell, Gates, Wilson, Barnes, and Searle were then nominated as members of the Executive Committee. On motion, Messrs. McDowell, Searle, and Gates were allowed to withdraw their names.

The tellers announced as the result of the first ballot the election of Messrs. Musselman, Roland, Reeder, Hiester, McDowell, Barnes, and Herr.

On motion of Mr. ROLAND, seconded by Mr. SMITH, the CHAIR named Messrs. Roland, Mullin, and McDowell a committee to wait upon the Governor and escort him to the meeting.

On motion of Mr. NOBLE, Thomas J. Edge was nominated Secretary, and on motion of Mr. Reeder, the President was directed to cast the ballot of the meeting for him.

On motion of Mr. GATES, the reading of the minutes was dispensed with.

The Committee on Legislation reported as follows:

Your Committee on Legislation would, in accordance with the rules of the Board, respectfully report upon the following topics, which have engaged their attention:

*First.* They have taken into consideration the interests of the Board and its work, and find that its field of operations has so widened and enlarged that some legislation is required to provide the means to carry on its work. We, therefore, recommend that the act for granting the usual appropriation be so amended as to provide that the item for district institutes, &c., be increased in the sum of two thousand dollars, making a total of three thousand dollars, to meet the demand of the different counties for the benefit of institute meetings. We also recommend the passage of a supplement to the act providing for the publication of the annual volume on "The Agriculture of Pennsylvania," so that more space shall be assigned to the production of this Board, the present allotment being much too limited to contain a fair digest of its transactions. We also suggest the propriety of asking the General Assembly to authorize the Board to enlarge the space allotted to its quarterly reports, and also an increase in the number issued, or else the issuing of a special volume to be made up from the essays and discussions that have not heretofore been published.

We have also considered the act of the last session of the Legislature, known as the "scalp or bounty act," and we are unanimous in favor of its repeal. The act is an illustration of the evils of unadvised legislation, and has, in the brief period of its operation, been sadly injurious to the general interests of the farmer and fruit-grower, as well

as expensive to the several counties. The approval of the Board is asked for the herewith attached act, which is intended to accomplish this purpose.

Your committee also took favorable action upon the accompanying bill offered by Mr. Gates, of Venango, and recommend its indorsement by the Board. The effect of its passage by the General Assembly would be to repeal the odious fence law of 1700.

Mr. McDowell of Washington introduced the question of the legalizing of the passage of traction engines along our public roads, (see act of previous session of the Legislature,) and advocated the theory that the several townships and municipalities of the State should be protected from liability from action for damages in cases where bridges and culverts are broken down by the great weight of said engines. By your committee the subject would be referred to a sub-committee consisting of Messrs. McDowell, Oliver, and Gates.

On behalf of the committee.

JOHN P. EDGE,  
*Chairman.*

On motion of the Secretary, that portion of the report of the Committee on Legislation referring to the repeal of the "scalp act," was withheld from discussion until the evening session, when it would be in proper order.

The report of the Legislative Committee, as it referred to fences, was discussed by Messrs. Searle, Edge, Oliver, Gates, Wilson, Scott, McKee, Noble, Musselman, Smith, Gundy, Eves, and the Secretary, and the repeal of the second section of the act of June 23, 1885, (to repeal the first section of an act entitled "An act for the regulation and maintaining fences;" passed Anno Domini, one thousand seven hundred,) the effect of which repeal would be that of removing the whole of the act of 1700 from the statute book without a vote by counties.

His Excellency, Governor James A. Beaver, was here introduced, and, on motion, a recess of ten minutes was taken.

Board re-assembled, Hon. James A. Beaver in the chair, who then addressed the Board, promising them his hearty co-operation and assistance during his term of office, and regretting his inability to preside at all of the sessions on account of the great pressure of official duty incident to the commencement of a new term of office.

On motion of the Secretary, the morning session was extended to one o'clock, so that the printed programme might be carried out.

On behalf of the Committee on Farm Implements and Machinery, Mr. GARRETSON of Adams, chairman, read the report of the committee, which, after discussion, was ordered to be incorporated in the proceedings of the Board.

On behalf of the Committee on Useful Birds, C. C. MUSSELMAN of Somerset, chairman, presented the extended and instructive report of that committee, upon which discussion was postponed until the evening session, and the report ordered to form a portion of the proceedings of the Board.

On behalf of the Committee on Fences and Fencing, CHANDLEE EVES of Columbia, chairman, stated that their report was incorporated with that of the Committee on Legislation, so far as the same referred to their special topic.

His Excellency Governor BEAVER announced that he had appointed Will B. Powell, of Crawford, as a member of the Board, to fill the existing vacancy in the list of his appointees.

On motion, the appointment of the chairmen of the standing committees of 1887 was referred to the Executive Committee. At a subsequent session this committee reported these chairmanships, as follows:

Legislation, Dr. J. P. Edge; Fruit and Fruit Culture, G. Hiester; Grasses and Forage Crops, N. F. Underwood; Forests and Forestry, Wm. Gates; Apiary and Bee Culture, M. W. Oliver; Dairy and Dairy Products, E. Reeder; Useful Birds, C. C. Musselman; Cereal Crops, J. A. Herr; Roads and Road Laws, D. Wilson; Wool and Textile Fiber, J. McDowell; Farm Implements and Machinery, I. Garretson. They also reported in favor of establishing a standing committee on poultry, with H. M. Engle as chairman.

The same committee also reported the following Advisory Committee and honorary officers:

*Advisory Committee*—G. Hiester, W. S. Roland, and J. P. Barnes. *Botanist*, Thomas Meehan, Germantown; *Pomologist*, E. Satterthwait, Jenkintown; *Chemist*, Dr. F. Genth, University of Pennsylvania; *Consulting Veterinary Surgeon*, Prof. R. S. Huidekoper, University of Pennsylvania; *Veterinary Surgeon*, Dr. F. Bridge, V. S., West Philadelphia; *Entomologist*, Prof. W. A. Buckhout, State College; *Microscopists and Hygienists*, Dr. H. Leffmann, Philadelphia, and Prof. C. B. Cochran, West Chester; *Ornithologist*, Dr. B. H. Warren, West Chester; *Meteorologists*, Prof. I. P. Osmond, State College, and J. L. Heacock, Quakertown; *Minerologist*, Prof. J. Willcox, Philadelphia; *Geologist*, Prof. J. P. Lesley, Philadelphia; *Stenographer*, Col. H. C. Demming, Harrisburg.

On motion, the Board then proceeded to decide as to the place of the next meeting, when Mr. Reeder named Bellefonte, and after discussion it was decided to hold the spring meeting at Bellefonte, at a time to be fixed by the resident member and the Advisory Committee.

New business being in order, Rev. W. L. Bull explained the provisions of an act relating to "Wayfarers' Lodges," which he proposed to introduce into the Legislature, and upon which he wished the indorsement or opinion of the Board; after discussion, the matter was referred to a special committee, consisting of Messrs. Wilson, McKee, and Reeder, who, at a subsequent session, submitted the following report, which, on motion, was adopted by the Board:

"Your committee, having examined the draft of a bill presented by the Rev. Mr. Bull and others, entitled "An act to provide for the temporary care and employment of wayfarers," and fully realizing the serious effect of the tramp evil upon the well-being of the community at large, recommend the following resolution.

*Resolved*, That the members of the Legislature be earnestly requested to consider the advisability of framing a new tramp act, which shall embody the principle laid down in the draft of the "wayfarers' lodge bill," which is that no assistance should be granted the vagrant or tramp without something in the shape of work being exacted in return therefor, which shall accrue to the benefit of the public."

(Signed,)

DAVID WILSON,  
ROBT. McKEE,  
E. REEDER.

On motion, adjourned until 2, P. M.

WEDNESDAY AFTERNOON, *January 26, 1887.*

Board called to order at 2, P. M., by Dr. J. P. EDGE, Vice President in the chair.

M. W. OLIVER read an essay in answer to the question, "Does Farming Pay in Pennsylvania?" The subject matter of which was discussed by Messrs. Dr. Edge, Wilson, Gundy, Oliver, Whitmer, Searle, Smith, Barnes, Brosius, and Secretary.

E. SATTERTHWAIT read an essay on "The Timber Question, and what Trees to Plant," which was discussed by Messrs. Hess, Searle, Dr. Edge, Roland, Oliver, and Binney.

Messrs. HESS and BINNEY announced that they were present as delegates from the Pennsylvania Forestry Association, for the purpose of explaining two drafts of acts which they proposed to submit to the Legislature, and upon which they wished to obtain the advice and opinion of the Board. After discussion, the delegation were referred to the Committee on Legislation, who were directed to make a report at a subsequent session.

An essay entitled "Retrospective," prepared by the Secretary, was then read by Mr. HIESTER, and discussed by Messrs. Underwood, Dr. Edge, and Smith.

On motion of Mr. BARNES a committee of three, consisting of Messrs. Hoffa, Clapp, and Herr, were appointed to draft and present for consideration, resolutions expressive of the sense of the Board in relation to the death of W. C. Packer, late member from Northumberland.

After answering sundry questions which had been sent to the Secretary, the Board adjourned to meet at 7.30, P. M.

WEDNESDAY EVENING, *January 26, 1887.*

Board called to order at 7.30, P. M., to hear an address by Dr. B. H. WARREN, ornithologist of the Board, on the "Food of Hawks and Owls."

After the close of the address, the Secretary presented a large amount of data, showing, among other things, the amount of bounty paid by each county of the State, and the opinion of each board of county commissioners in relation to the total or partial repeal of the act of June 23, 1885, "for the destruction of wolves, wild-cats, foxes, minks, hawks, weasels, and owls in this Commonwealth."

Mr. NOBLE of Bedford read the resolution of Bedford County Pomona Grange against the repeal of the law. Colonel H. C. DEMMING, at the request of the Secretary, read letters from Daniel Steck and George Snyder, the former against the repeal of the law, and the latter in favor of repeal. C. F. WICKERSHAM, delegate from Chester county, read a short essay against the repeal of the act, and the subject was declared open for general discussion. The Secretary announced that it had been proposed to vote (at the close of the discussion) the subject of repeal, as follows:

*First.* A vote as to its repeal, so far as it applies to hawks and owls, by the Board only; then by the audience.

*Second.* A vote as to the repeal of the whole law by the Board, and then a similar vote by the audience.

Dr. J. P. EDGE offered the following:

*Resolved*, That for the protection of useful birds and animals remaining in the State from wholesale destruction suffered under the operation of what is known as "the scalp law," and also for the pro-

tection and relief of the county treasuries, the General Assembly be requested to favorably consider the act presented by the Committee on Legislation of this Board.

After discussion by Messrs. Searle, White, Musselman, Wilson, Colvin, Rice, Dr. Edge, Smith, Henderson, Engle, Gundy, Herr, Isenberg, Warren, and Secretary, Dr. Edge and Mr. Gates were appointed a committee to draft a bill expressive of the wish of the Board, as indicated by the subsequent vote, and present the same to the Legislature for its action.

After a standing vote had been taken upon each phase of the question, the Secretary announced the result as follows:

*Vote of the Board on the repeal of that portion of the act referring to hawks and owls*—For repeal, 21; against repeal, 1.

*Vote of the Board as to the repeal of the whole act*—In favor, 18; against, 1.

*Vote of the audience as to the repeal of that portion relating to hawks and owls*—In favor, 37; against, 2.

*Vote of the audience in relation to the repeal of the whole act*—In favor, 25; against, 1.

On motion, adjourned until 9, A. M., Thursday morning.

THURSDAY MORNING, *January 27, 1887.*

Board called to order at 9, A. M., by M. W. OLIVER, Vice President, in the chair.

Mr. NOBLE read a series of resolutions from the Bedford County Pomona Grange, and from Bridgeport Grange, No. 602, which were referred to the Committee on Legislation.

The SECRETARY presented the preamble and resolutions of Freehold Grange, (Warren county,) in favor of the repeal of the "scalp law," which were referred to the Committee on Legislation.

On motion of Mr. ENGLE, it was decided to appoint a standing committee on ornithology, with Dr. B. H. Warren as chairman, with power to make up the committee.

Report of the special committee on the bill establishing wayfarers' lodges was presented, and discussed by Messrs. Searle, Oliver, Dr. Edge, Gundy, Whitmer, Garretson, McDowell, Musselman, Scott, Bull, Wilson, Noble, Young, Smith, and Hiester, and adopted.

The special committee to whom was referred the question of damages done to public bridges and culverts by traction engines, made a report in the form of a draft of a bill for an additional section to the act of 1885, and Mr. McDowell was appointed to present the same to the Legislature.

On motion of Mr. REEDER, the regular order of business was taken up, and Mr. SEARLE read an essay on "Irrigation."

On motion of the SECRETARY, Dr. CALDER then read an essay on "Fruit Culture."

Mr. HIESTER then read an essay by H. M. Wise, (who was unavoidably absent,) on "Wheat Raising;" the subject-matter of which was discussed by Messrs. Powell, Whitmer, Roland, Searle, Engle, Hoffa, Young, Wilson, Scott, Oliver, Herr, Colvin, Zerr, and White.

His Excellency Governor BEAVER presented an invitation from the New York Dairymen's Association to appoint delegates to represent Pennsylvania at the approaching annual meeting of that association, and requested the Board to suggest the names of such delegates. On

motion of Dr. EDGE, the President and Secretary were requested to furnish names of suitable delegates.

Mr. BARNES of Lehigh, offered the following, which, after discussion, was referred to the Committee on Legislation:

"WHEREAS, The Governor of this Commonwealth frequently is required to appoint delegates or representatives to attend State and United States organizations for the general welfare of our State or the United States; therefore

"Resolved, That the Committee on Legislation be hereby requested to draw up an act to be presented to the honorable bodies of the Legislature, which shall authorize and empower the Treasurer of the Commonwealth to pay out of the general fund in his hands, all the necessary expenses incurred by such appointees, for such actual service rendered."

On motion, adjourned until 2, P. M.

THURSDAY AFTERNOON, *January 27, 1887.*

Board called to order at 2, P. M., by M. W. OLIVER, Vice President, in the chair.

Prof. R. S. HUIDEKOPER, consulting Veterinary Surgeon of the Board, delivered an address upon "Veterinary Education."

The committee to report resolutions relative to the death of W. C. Packer, late member from Northumberland, reported a series of resolutions, which were unanimously adopted.

JOHN I. CARTER read an essay on "The Feeding and Care of Dairy Cows," which was discussed by Messrs. Young, Huidekoper, Carter, Wilson, and Secretary.

J. C. THORNTON then read an essay on "The General Purpose Cow," which was discussed by Messrs. Engle, Searle, Huidekoper, Thornton, Carter, Powell, and Secretary.

Mr. REEDER offered the following resolution:

"Resolved, That this Board recommend to the Legislature that an appropriation to be devoted to the testing of samples of oleomargarine, suspected, and imitation, and other butters, be granted for the use of the Board, and that the amount asked for be one thousand dollars per year for two years."

After discussion, the resolution was agreed to, and Messrs. Satterthwait and Reeder appointed a special committee to present the resolution to the House Committee on Appropriations, before whom the appropriation bill of the Board was pending.

Mr. SEARLE offered the following, which was unanimously adopted:

"Resolved, That this Board request the Legislature not to repeal the act known as the "Oleomargarine Law;" adopted unanimously.

On motion, adjourned to meet at 7.30, P. M.

THURSDAY EVENING, *January 27, 1887.*

Called to order at 7.30, P. M., by M. W. OLIVER, Vice President, in the chair.

Hon. JOHN W. HICKMAN addressed the Board upon the subject of "How to Bring up a Worn-out Farm by the Use of Commercial Fertilizers Alone," and the remainder of the session was devoted to a complete and thorough discussion of the fertilizer question in all of its bearings.

Adjourned to meet at Bellefonte, at the call of the Advisory Committee.

## THE DUTIES OF ADJACENT LAND OWNERS WITH REGARD TO DIVISION FENCES.

By Hon. A. N. PERRIN, *Titusville, Pa.*

MR. PRESIDENT AND GENTLEMEN OF THE STATE BOARD OF AGRICULTURE: In respectful obedience to your request, I will present, as briefly as may be, some remarks on "The Rights and Duties of Adjacent Land Owners with Regard to Division Fences."

There was some *very early* legislation on the subject of the rights and duties of the possessors of adjacent lands, and while the acts to which I refer may not be found in what may be termed "the books," yet I believe them to be wholesome in their provisions, and they are so acknowledged, for the same or like principles are embraced in all subsequent legislation.

Let me quote, for instance, "Thou shalt not remove thy neighbor's landmark which they of old time have set in thine inheritance," \* \* \* And again, "Cursed be he that removeth his neighbor's landmark, and all the people shall say, Amen."

And why should not the echo of this ancient "amen" to those sentiments be taken up and sounded anew through the ages, for it is ever true, that the safety of society and the welfare of individuals rest largely upon the proper acknowledgment and peaceful enjoyment of *rightful* possessions.

In order, however, to discover an answer to the question in which we are more immediately concerned at this time, we will pass directly to its consideration.

What are the rights and duties of adjacent land-owners, with regard to division fences? Between owners of adjacent lands, that which is *right* for one to require it is the *duty* for the other to perform. The view taken will be that of the *legal* obligation of owners of adjacent lands to make and maintain division fences, which obligation rests mainly on positive enactments of the Legislature. At common law, the tenant of a close was not bound *to fence* against an adjoining close, but he was required to keep his cattle within his own close; every intrusion by them upon another's possession was treated as a trespass. *Gregg vs. Gregg*, 55 Pa. St., 227.

However, at an early day this general rule was changed in what was then the Province of Pennsylvania, by statutory enactment imposing upon land-owners new duties in reference to fences along the highways, and also partition fences between owners.

In 1700, an act was passed for regulating and maintaining fences, which reads as follows: "For preventing all disputes and differences that may arise through the neglect or insufficiency of fences in this Province and counties annexed: *Be it enacted*, That all corn-fields and grounds kept for inclosures, within the said Province and counties annexed, shall be well fenced with fence at least five feet high, and of sufficient rail or logs, and close at bottom." \* \* \* If we followed out that portion of this act affecting fences along the highway, it would lead into the law as to cattle running at large, strays, fence-viewers for those purposes, &c., but we leave this as not being

embraced in the term division fences. That portion of the act which relates directly to the question under consideration, will be found in the second section, and in the following words: "And for the better ascertaining and regulating of partition fences: *Be it further enacted*, That where any neighbors shall improve lands adjacent to each other, or where any person shall inclose any land adjoining to another's land already fenced in, so that any part of the first person's fence becomes the partition fence between them, in both these cases, the charge of such division fence (so far as inclosed on both sides) shall be equally borne and maintained by both parties." The general features of that law remained in force for almost five generations, namely, till 1842. In the meantime, however, the Legislature passed various enactments touching the matter in question.

For instance, in 1781, a law for regulating party walls and partition fences in the city of Philadelphia, which was amended in 1782, and again in 1805. In 1729 and 1763, acts were passed bearing more directly on what should be esteemed a lawful or sufficient fence; they also provided for ways and means of settling cases of trespass; but in 1784 those were repealed. These special references might be extended into a long list, but as they all relate to nearly the same subjects, viz: What shall be considered a lawful fence? What constitutes a trespass? How shall proceedings be conducted in case of a trespass? How shall damages be ascertained and recovered? How shall appraisers be appointed, and how proceed? and as many of them simply repeal in whole or in part previous laws, and many are purely local, I deem it no part of my duty to extend research in that direction. Besides, if I did, I would be liable for a trespass upon your time and could not present any sufficiency of defense.

That which seems to have been regarded as a clear and just provision relating *especially* to division fences in the act of 1700, already quoted, was reenacted on the 11th of March, 1842, but as some slight changes in phraseology are introduced, it might be well to present the principal section here:

"When any two persons shall improve lands adjacent to each other, or where any person shall inclose any land adjoining to another's land already fenced in, so that any part of the first person's fence becomes the partition fence between them, in both these cases, the charge of such division fence, so far as is inclosed on both sides, shall be equally borne and maintained by both parties." The foregoing is really all the law we have on the subject of the rights and duties of adjacent land-owners with regard to division fences, except in some instance of local application, and unless in case where the division line shall be of water, it would seem sufficient, plain, and just. With the question settled that improved fields of adjoining owners shall be fenced, and that the owners of *partition* fences shall contribute equally to the expense, we will inquire: (1.) What is required to constitute a legal fence? (2.) What provisions are made for adjusting differences that may arise concerning partition fences between owners of adjacent lands; and lastly, what are some of the more important decisions made by the courts in their construction of the law?

At the outset we find ourselves almost bewildered in trying to ascertain the precise legal regulations as to height and manner of construction of fences throughout the Commonwealth. A full statement would require a careful examination of the local laws of every county. We note, however, some of the more important changes, illustrating

the differing standards of a legal fence—enough, I trust, to serve the purpose and accomplish the object of this paper. For example, by the act of 1700, grounds kept for inclosure “shall be well fenced with fence, at least five feet high, of sufficient rail or logs, and close at the bottom.” For a term of years the above was the universal law on the subject; but in 1729, under the title of “erecting of pounds in each township of this Province,” an act was passed, which was general in its application, providing that “all fences shall be esteemed lawful or sufficient though they be not close at the bottom, so that the distance from the ground to the bottom thereof exceed not nine inches, and that they be four feet and a half high, and not under.”

After the lapse of more than fifty years, or in 1784, a law was passed which repealed this act of 1729, and changed this standard within the (then) counties of Bedford, Northumberland, Westmoreland, Washington, and Fayette, and provided “That all fences within the limits of the said counties shall be made and erected in the following manner: All worm fences shall be four feet and an half high, with sufficient stakes and riders added thereon, and that the under rail in each panel shall not exceed five inches from the surface of the ground, and the first four rails in each panel shall not exceed five inches wide between the rails, and that the said fences shall have at least four feet worm; and that all post-and-rail fences shall be four feet and an half high, and the distance between the rails as aforesaid.”

Again, by an act passed in 1800, the act in 1784 was repealed, so far as respected the (then) limits of Northumberland county, and the provisions of the law of 1729, already quoted, were revived. By an act passed in 1805, the same law was made applicable to Luzerne county.

The people of Washington and Allegheny counties, not being satisfied with the law of 1784, next asked to be given another standard defining a legal fence, and it was provided in 1808, as to those counties, “That *all* fences shall be deemed lawful which are four and an half feet high, if, in the judgment of the referees, the fence or fences viewed by them shall be such, in other respects, as are generally constructed, and deemed a sufficient fence within their respective townships.”

Once more, a further change was made, and by acts of 1807 and 1810, the counties of Philadelphia, Bucks, Chester, Lancaster, Northampton, Wayne, Delaware, Montgomery, and York are relieved from the provisions of the act of 1729, which placed them again subject to the provisions of the act of 1700, both of which have already been presented. These and later acts would seem to leave Bedford, Westmoreland, Washington, and Fayette resting under the acts of 1784. March 7, 1800, and February 25, 1814, the counties of Washington and Allegheny, under the act of March 28, 1808, and Erie county under the act of April 24, 1857, as to what shall be considered a legal fence, while the remainder of the State comes under the acts of 1700 and 1842, except Philadelphia, which is under the laws of March 11, 1862, March 22, 1865, and May 6, 1870.

In connection with the foregoing, it may not be amiss to call attention to the fact that, starting out with a settlement of the Province, it was originally divided into the three counties of Philadelphia, Chester, and Bucks, and that sub-divisions have been made, commencing in 1729, when Lancaster was formed from a part of Chester, and continuing down to 1878, when Lackawanna was formed from a part

of Luzerne. There are now in all sixty-seven counties. Therefore I will only repeat what I have before said, that the local laws of each county, and even townships of the same county, must be examined to determine an answer to the question of what constitutes a legal fence, as to that particular locality. Boroughs have also special authority to regulate partition fences within their limits.

Next, where differences arise between owners of adjacent lands, with regard to division fences, what provisions are made for their settlement? Originally, by act of 1700, each county court was required to appoint “so many honest and able men as they shall think fit,” for the purpose named, and then the act of 1784, as to that portion of the State covered by it, provided for annual elections by the freeholders, of fence-viewers, to whom differences should be referred, which power was again, by act of 1808, re-delegated in part of the courts. But not to follow all the changes that may have occurred under this head, I will now refer to the statute passed March 11, 1842, which makes the township auditors perform the duties of fence-viewers. A majority of the viewers in any township constitutes a quorum, and a refusal or neglect of any viewers to act or perform the duties prescribed by law, will subject him to a fine of three dollars, for each refusal or neglect, payable to the party aggrieved, provided such refusal is between April 1 and November 1, as at other times in the year they are relieved from action. After notice is given to the viewers, the form of which is not defined, they “shall, within five days thereafter, view and examine any line fence as aforesaid, and shall make out a certificate in writing setting forth whether, in their opinion, the fence of one has been already built, is sufficient; and if not, what proportion of the expense of building a new or repairing the old fence should be borne by each party, and in each case they shall set forth the sum, which, in their judgment, each party ought to pay to the other, in case he shall prepare or build his proportion of the fence, a copy of which certificate shall be delivered to each of the parties; and the said viewers shall receive the sum of one dollar for every day necessarily spent by them in the discharge of their duties, which they shall be entitled to receive from the delinquent party, or in equal sums from each as they shall decide to be just.”

If the delinquent party “shall not within ten days after a copy of the certificate of the viewers shall have been delivered to him proceed to repair or build the said fence, and complete the same in a reasonable time, it shall be lawful for the parties aggrieved to repair or build the said fence, and he may bring suit before any justice of the peace or alderman against the delinquent party, and recover, as in other actions, for work, labor, service done, and materials found; and either party may appeal from the decision from the justice or alderman, as in other cases.”

I find no distinct provision in the statutes for a sub-division or apportionment of division fence, nor for re-adjustment in case of transfer of portions of the land to different persons.

Many times in actual practice it is the custom of adjoining owners to agree upon a specific half of the division fence to be kept up by each. This would seem to be a proper plan were no changes to be made involving a sub-division of the land, but changes will occur by sale, inheritance, and otherwise. This necessitates another theory. In a case decided in 1845, 2 Pa. St., 127, which passed upon the acts of 1700 and 1842 the court says: “The act of 1842 sanctions the practice

of Pennsylvania under the act of 1700. That practice was that whenever persons used a common fence, each was bound to pay a moiety of the cost of its erection, and each was bound to maintain it, each had a common advantage, and the fence was equally beneficial to both."

That construction meets all cases, for no matter what changes occur or who happen to become adjoining owners, each must contribute one half the cost of keeping up the entire fence as between him and the person who happens to be his neighbor. The ownership of an interest in the division fence passes by a sale of the land as part of or appurtenant to it. These two principles pass on together down through all changes of ownership.

As to the original building of a fence, in which two are to share at the time, the decisions seem to indicate that in case of failure on the part of adjoining owners to agree, or of either to do his part, one of them may build a half, and require the other to build the other half in distance, and if he fails to do so within reasonable time, may hold him accountable in case of damage, or one may build the whole fence, and compel his adjoiner to pay one half the proper expense, and when once built and paid for, the whole fence is owned jointly by both. *Rangler vs. McCreight*, 27 Pa. St., 96; *Rohrer vs. Rohrer*, 18 Pa. St., 367; *Painter vs. Reese*, 2 Pa. St., 127.

By act of March 3, 1847, the duties of fence-viewers, imposed upon township auditors, were extended and imposed upon borough auditors; and it would seem that the Legislature intended such duties should be performed in cities of the third class by the city engineer, by act of May 23, 1874, section twenty, clause forty-seven, while in the county and city of Philadelphia the act of 1862, as amended in 1865, and again in 1870, the building inspectors are fence-viewers, and settle questions of difference between adjacent land-owners with regard to division fences.

Having the question settled as to what in law is required to constitute a legal fence, and having also gained a knowledge of how to proceed in case disagreements arise between owners of adjacent lands regarding division fences, we now present some of the decisions of the courts upon the meaning and intent of the laws under consideration.

Almost all conceivable questions have been presented as to what are the rights and duties of men, even under what would be termed a plain and simple law. It has been said that "law governs man, and reason the law," and while I am quite convinced of the reasonableness of the laws pertaining to the subject under consideration, yet, according to the records, it has been no easy task to govern man.

At this point it seems proper to define what is meant by improved lands. There seems to be two standards of decisions, one is applied to taxes on improved and unimproved, or, as they are called, "seated and unseated lands;" the other, as applied to division fences.

In the case of taxes, a plain, visible improvement upon the part of the tract usually brings the whole of that particular tract or piece on to the seated or improved list; while, as to fences, there must be an improvement, clearing, cultivation up to the boundary line.

In *Palmer vs. Silverthorn*, 32 Pa. St., 65, it was decided that one of the owners of adjacent *unimproved* lands cannot call upon the other to contribute to the charge of a division fence between them, and that the act of 11th May, 1842, is only applicable: (1.) To the case of adjacent owners *improving their lands up to and adjoining each other*, or

(2.) to one clearing up to the inclosure of a prior occupant, so that "any part of the first person's fence becomes the partition fence between them."

It has also been decided in *Rangler vs. McCreight*, already cited, that adjoining land-owners may agree not to make division fence if they so elect, and yet they are liable, the one to the other, for damage that may arise thereby; or where one party puts up a partition fence for one half the distance between himself and his neighbor, who refuses to complete the same, he is not liable for trespass upon said neighbor's land should his cattle go thereon.

Also, in *Smith vs. Johnson*, 76 Pa. St., 191, that when, by agreement, a partition fence has once been built on the line, neither of the adjacent owners or occupants subsequently building a fence entirely on his own land, is authorized to remove any portion of the line fence previously erected, as the materials are dedicated to the realty; and yet, if one party *unlawfully* remove a partition fence, placing it wholly on his own ground, his neighbor, if he build up to it, will be liable for trespass, because it has ceased to be a partition fence, and he goes on his neighbor's land to make the connection. But nothing can take away the right of "an occupant to place his fence *exactly* on his boundary, in anticipation of its becoming a division fence, and, consequently, as much on his neighbor's land as on his own. His occupancy of so much of it as happens to be necessary, like the possession of a tenant in common, is not adverse, but for the benefit of both." *Dysart vs. Leeds*, 2 Pa. St., 490.

In the case of *Stoner vs. Hunsicker*, 47 Pa. St., 514, the opinion of Judge Agnew is expressed in such clear terms that I can do no better than to reproduce a portion bearing upon the rights and duties of adjacent owners of land regarding their division fences. A fence is "the subject of legal duty and legal protection; a barrier erected as a landmark of boundary, a protection of property, and a means of preserving the peace of society. \* \* \* Fences are a part of the realty, and become affixed to it, so that they are no longer transitory as personal estate. They pass by a sale of the farm as much as the soil itself. The building of a boundary fence is, therefore, a dedication of the materials to the realty, \* \* \* and cannot be removed at pleasure."

An occupant, however, is not bound to join in the erection of a fence on the division line. He may set his fence, if it please him, not on the line of division, *but within it*, and may refuse to permit the owner of the adjoining land to join him, and thus compel his neighbor to make a fence to protect himself.

This may be done in case of the destruction of the division fence by flood or otherwise, or by the abandonment of his ownership in the division fence. *Painter vs. Reese*, 2 Pa. St. R., 126; *Dysart vs. Leeds*, 2 Pa. St. R., 488.

In the exercise of this legal right, men have often resorted to the use of power granted under the law for unworthy purposes. Petty quarrels between neighbors, and often between members of the same family, are handed down from one generation to the other; and, as an evidence of malice and folly, one will sometimes see parallel fences, one on each side of the line, with barely enough space between them for a person to pass, and dedicated to no use whatever, but only serving as a mark of shame to him who would *thus* perpetuate the evidence of such a resort for revenge. This, of course, is an unwarranted

exercise of a legal *right*, and it is the duty of adjacent land-owners to discontinue all such methods, and each to agree with his adversary quickly.

Where, however, one of the owners or occupants of adjacent improved lands abandons his division line, and sets his fence in upon his own land, and throws out a lane to *public* use, which the law permits him to do, he is not to be blamed, for thereafter they do not *improve adjacent* lands, and are not within the statutory remedy. *Rohrer vs. Rohrer*, 6 Pa. St. R., 367.

The question might arise—as, in fact, it has already arisen—what are the rights and duties in case it is alleged that the line is in dispute? It has been decided that such an excuse is insufficient to sustain a refusal for contributing to the cost of a partition fence. *Stephens vs. Shriver*, 25 Pa. St., 78.

Once more, let a division fence stand twenty-one years, although it may be crooked, passing first on the land of one, and then on that of the other adjacent owners, it becomes the true boundary, notwithstanding the deeds of both parties call for a straight line. *McCoy vs. Hance*, 28 Pa. St., 149.

These fences, so long authorized, have come under protection of criminal law. By act of March 23, 1865, it is provided in substance that if any person shall maliciously or wantonly break or throw down any post and rail, or other fence, erected for the inclosure of land, or shall carry away, break or destroy any post, rail, or other material of which such fence is built, inclosing of lots or fields, he shall, on conviction, be sentenced to a fine not exceeding fifty dollars and costs, pay or undergo imprisonment not exceeding six months, or both, or either, at the discretion of the court.

Since commencing my examination of this subject, I have discovered many interesting questions, with important decisions bearing upon different portions of it, which, of course, can find no place in this paper; therefore, after stating some of the leading conclusions to be derived from the subject, I will give the closing remarks of this article.

#### Conclusions.

1. Adjacent-land owners must make equal contribution to the expense of building and maintaining partition fences.
2. Fences should be constructed according to the law applicable to each particular locality.
3. When differences arise between owners of adjacent lands with regard to division fences, they may be settled by fence-viewers.
4. In the rural districts, the township auditors are required to perform the duties of fence-viewers.
5. A majority of the viewers of a township constitutes a quorum.
6. A view by fence-viewers, and a certificate in writing from them is necessary and sufficient before suit can be maintained for contribution.
7. A fence-viewer refusing or neglecting to act as required by law is subject to a fine.
8. Viewers are allowed five days' notice, and they are entitled to one dollar per day for their services, to be paid as they may decide, from either party, or divided between them.
9. Suit may be brought, if necessary, for the enforcement of the verdict of the viewers, but an appeal may be taken from the decision of the justice or alderman.

10. Owners or tenants of adjacent *improved or inclosed lands only* can be required to build or contribute to the building and maintaining of partition fences.

11. The only occupancy of a neighbor's land for the purpose of building or connecting to a partition fence not a trespass, is in the use of so much of said land as is necessary to place a worm or other lawful fence *exactly* and *evenly* on the line, and connect thereto.

The principal held by the common law, that a "tenant was required to keep his cattle within his own close," is being thoughtfully considered, and it is an interesting problem, if it be not the fairest and most economical solution of the whole fence question.

And yet, as I have endeavored to point out, the law is otherwise, and it is the *duty* of every citizen whose interests are involved to become accurately informed as to his *rights*; remembering always that "rights are, in the same individual, to be compared with his duties; and rights in one person are to be balanced with the rights of others."

The subject having been declared open for discussion—

The SECRETARY. Do I understand you that where I and my neighbor have to keep up a fence, that the neighbor may elect which part to keep up of the fence?

Mr. PERRIN of Crawford. No, sir.

The SECRETARY. Half the fence must be on my land?

Mr. PERRIN of Crawford. If I undertake to protect your property, the fence must be an even division. If a worm fence four feet wide, two feet must be on your land, and two feet on your neighbor's. That is the law.

Mr. BEEBE of Venango. I rise to allude to one single omission, and there is a very good reason for it. Our friend, not in the line of the law, has made more than an ordinary research; he has made a very exhaustive one. He sets forth the same views that I have held for the past three or four years. But his mistake is, in this particular, in relation to the law of 1784. I had supposed, too, that that related to the portion covered by the bounds of Allegheny, Westmoreland, and Fayette, as he alludes to. But in looking over the laws, I found out that there is a special act for Allegheny county, which wipes out the law in relation to Westmoreland and Fayette counties, too; that by an act introduced by a member from Allegheny county, "the second section of the act of 1784, relating to Allegheny, Westmoreland, and Fayette counties" was repealed. I have no doubt the maker of that act meant that that section should no longer apply to Allegheny county, but he neglected to state specifically in relation to Allegheny county. He struck out the whole of the law of that single section, because it is without limitation; for it says the act of 1784, in relation to those counties, "is hereby repealed." That would cover all the territory, at least of western Pennsylvania.

Prof. MEEHAN of Philadelphia. I do not understand that there is anything on the statute books that would constitute a live fence—for instance, an osage orange fence—a legal fence.

Mr. PERRIN of Crawford. I have not discovered anything, except in that amendment where it said in reference to some of the western counties "any fence that may be considered sufficient" in that locality—in those counties or townships. While there is no reference made to it, yet I judge there is discretion there. If in that locality a certain fence is considered sufficient, that might perhaps include such a fence

as the gentleman referred to, although I did not discover any reference made to such fence at all.

Prof. MEHEAN of Philadelphia. I have one or two cases in my mind. For instance, a person puts up an osage orange fence before dividing up his estate, or by mutual agreement two persons put up an osage orange fence on the division line. The adjoining estate is afterwards sold, and the person who purchases the property is not satisfied with the osage orange fence, would the owner be compelled to cut that away and put in one of timber?

Mr. PERRIN of Crawford. I should think not. But at the same time there may be something in the local legislation, something applicable to the county or township, as our books are full of local legislation that might have some influence, or bear upon it. I did not discover anything of the kind. I think that some one of these attorneys could answer it better than I.

Mr. OLIVER of Crawford. I understood the gentleman to say that when a division had been made by owners of land, that there was provision made for the fencing. I will illustrate my question: Mr. A and Mr. B own pieces of land adjoining, one hundred rods, and the viewers are called to make a division; and they state that A shall build north fifty rods from the center, and B south fifty rods. Mr. A sells off to different individuals. Now must B keep up half the fifty rods first given to A, or must C, D, and E, keep up the whole division line opposite the land which they own, which would be sixteen and two thirds rods each?

Mr. PERRIN of Crawford. No, sir. The way I meet that is, that in the sale, A sells his portion of the fence. It is a part of the realty. It may be necessary to call viewers again to divide up for C, D, and E, and designate the half of the land to be kept fenced up between themselves and the adjacent owner. I have found that in some States there are provisions especially for cases of divisions of estates, and there are provisions made for the divisions of the fences. But these would have to be made according to the just principles that prevailed in the first division, by the calling of the viewers again, and making a sub-division of the fence to accord with the sub-division of the land, as I understand it.

Mr. OLIVER of Crawford. I think that principle is correct: and yet it subjects a party sometimes to great inconvenience. For instance, if this be a common village property, and sold off into lots, and you compel Mr. B to keep up in good order another piece of fence.

Mr. PERRIN of Crawford. There is no other way.

Mr. DANIEL STECK of Lycoming. Suppose A and B own adjoining lots, who shall decide what kind of a fence is to be built on the line? A decides upon a picket fence, but B decides upon a worm fence, to take up two feet of A's land. Would that be right, or could B be compelled to build a board fence?

Dr. J. P. EDGE of Chester. B does not do that, because he throws two feet on his own side in making the worm fence.

Mr. STECK of Lycoming. The worm fence takes up four feet, and the board fence does not take up more than a foot. How then B takes up two feet of A's land, when he makes his worm fence.

Dr. J. P. EDGE of Chester. The board fence is on the line, and the worm fence is on either side of the line.

Mr. BEEBE of Venango. Unfortunately, my friend must reverse his position. The State of Pennsylvania does not secure the privilege

of a board fence. The standard fence is made of "logs or rail, five feet high, and close at the bottom."

Mr. SPROUT of Lycoming. It sometimes happens that we have to open a new chapter, when the subject before us has been sufficiently dwelt upon. I have been looking into fences somewhat of late, and I have brought along some fence to show you gentlemen; not that I want to urge it at all, but I want you to see it. I am going to recommend the barbed wire, for the reason it has so far met my mind or sanction so well that I must do so. Lately I discovered that a manufacturing company of Massachusetts have finally settled upon a barbed wire, or ribbon barb, which looks like a very good one. As for myself, I have no interest in it, except I expect to use it to advantage. Then I recommend a certain kind of post as the standard, which, I suppose, I shall have to own myself. There is a patent upon it, I am sorry to say; but I offer it in connection with what you may call the "ribbon barbed wire," as the best fence, or the fence for the people. Now, I am a native of this State, and was raised here; and ought to have some pride in our Commonwealth, and do; but I must say that the people of Pennsylvania do not seem to act as though they appreciated improvement as they do in the West.

Mr. BEEBE of Venango. Perhaps it is not a legal fence.

Mr. SPROUT of Lycoming. I must say that I believe the worm fence is barbarous, and that the best rail fence now made is barbarous, that they are both a great way back; and if we do not consider that we have made any improvement, or hope to improve, we shall have to continue with the old barbarous system of taking up land, which makes a hedge row for weeds, and a harbor for vermin, both of which are nuisances. The Western people have adopted, in spite of opposition, the barbed wire; and I am told by persons from the West that they are pleased with it, and are going to adopt it universally. While in Pennsylvania we read articles that the barbed wire is barbarous, and cannot be tolerated. Matches will burn buildings; water will drown people; and a great many things we can think of will do damage; but we can keep away from them. But I am satisfied, with the experience I have had, that the barbed wire fence is the best by far for the farmer.

In my experience with unruly cattle, it is a perfect remedy. Let an unruly animal once get a taste of the barb, and he will not attempt it again. I am going to put up two miles of this manufacturing company's barbed wire.

---

## THE FENCE LAWS OF PENNSYLVANIA.

---

By HON. HENRY M. SEELEY, of the *Twenty-second Judicial District of Pennsylvania.*

*Read at the Honesdale Meeting.*

---

I have been requested to speak, not upon the fence laws of Pennsylvania in general, but only upon a single feature of those laws.

In June, 1885, the Legislature of this Commonwealth passed an act repealing the first section of the act of 1700 relating to fences, and providing that this repealing act should not take effect in any county until it has been ascertained that the provisions thereof are deemed expedient, and desired therein, by an election to be held as therein directed.

I was invited to say something to you with reference to this act, and its effect in counties where it might become operative.

The duty to maintain line or partition fences is no part of the subject-matter of the section to be repealed, and is not presented for our present consideration.

I purpose, in a rapid review of the history of this subject, to inquire as to the common-law rule regulating fences; under what circumstances, and when first, a different rule came into effect; following the course of the legislation upon the subject in the Province and State of Pennsylvania; considering what portion of the first section of the act of 1700 is now in force, what it accomplishes, and what change would result from its repeal.

The very idea of separate ownership of land implies exclusive right of possession. No other person may enter upon it without the owner's consent; hence it is said that every man's estate is encircled by an ideal or imaginary fence, reaching from the surface upward to the heavens, and downward to the center of the earth.

Every man is bound so to conduct himself not only, but so enjoy his property, as not to injure that of another. So it was that if one permitted his cattle or his servants to trespass upon the lands of another, he must respond for all damage done. The ideal fence erected by the law was, in theory, as secure a protection as any actual fence could have been.

The first law governing this question, to which I direct your attention, is found in the Second Book of Moses, commonly called the Book of Exodus, in the twenty-second chapter and fifth verse, as rendered in the newly revised version, where we read:

"If a man shall cause a field or vineyard to be eaten, and shall let his beast loose, and it feed in another man's field, of the best of his own field, and of the best of his own vineyard, shall he make restitution."

This was the common law of England. The duty was upon the owner of cattle to restrain them from injuring his neighbor; not upon the cultivator of the soil to protect his crops against his neighbor's cattle.

In England, this general rule was subject to qualifications in its application. Sometimes, by prescription, a man became charged with the duty of maintaining a fence around his field. (See Coke upon Littleton, 283.) Sometimes Parliament, in providing for the division of common lands, directed how and by whom fences should be maintained. (See form of plea averring such an act in Wentworth's Pleadings, vol. 8, pp. 36-37, &c.) Whenever, in any way, the individual became responsible for maintaining a fence about his own field, he was not permitted to recover against another damages which could only occur by reason of his own neglect to maintain his fence.

This protection which the common law furnished land-owners, seemed exceedingly burdensome to some of the early settlers of the American Colonies. Cattle were permitted to range at pleasure through large tracts of unimproved land, cultivated fields were com-

paratively small, and the custom arose of settlers combining to inclose in common, by one exterior fence, lands for cultivation, so protecting them against the danger of injury from wandering cattle.

This was a reversal of the common-law rule, and substituted a material for an immaterial fence around cultivated fields. Originating in the voluntary act of neighbors, it came to be recognized and regulated by law, and was the first step toward the compulsory fence law as we have it to-day.

When first it was so recognized and regulated, I do not know; but in 1664, in a digest prepared under the authority of His Royal Highness, the Duke of York, of laws "collected out of the several laws now in force in His Majesty's American Colonies and plantations," we find the following:

"Every person interested in the improvement of common fields inclosed for corn or other necessary use, shall, from time to time, make and keep his part of the fence sufficiently strong and in constant repair, to secure the corn and other fruits therein, and shall not put, cause, or permit any cattle to be put in so long as any corn or other fruits shall be growing or remain upon any part of the land so inclosed, unless by some general expressed agreement of such as are interested." (Duke of York's Laws, p. 15.) Also the following: "And when lands lie in common, unfenced, if one man shall improve his land by fencing in several and others (one or more) shall not, he who shall so improve shall secure his land from other men's cattle, unruly cattle excepted, who shall compel no man to make any fence with him except he also shall improve in several." (*Id.*, p. 16.) Here is a compulsory fence law, and a provision that only owners of adjoining improved lands can be compelled to contribute to the erection of line fences.

On the 25th of September, 1676, by an ordinance promulgated by Governor Andross, these laws were put in force upon the Delaware river and its precincts, (*ib.*, 455,) and were in force when William Penn received his charter, in 1681.

In the "Body of Laws of the Province of Pennsylvania and Territories thereunto belonging, Past at an Assembly held at Chester, alias Upland, the 7th day of the 10th Month called December 1682," under the Proprietary this matter of fencing was very summarily disposed of in chapter XCI, as follows:

"That all corn-fields shall be fenced, and all fences shall be at least five foot high, and for default thereof such person shall be fined at the discretion of the County Court." (*ib.*, p. 136.)

When, by the suspension of William Penn's authority and the commission to Benjamin Fletcher, the laws adopted under Penn's government were abrogated, this law relating to fences was considered of sufficient importance to be included in the petition of right presented by order of the General Assembly to Governor Fletcher asking that certain of the fence laws be approved and put in execution, and it was so approved. (*ib.*, p. 188, &c., p. 551. 1 Smith's Laws, IV-VI.)

In 1700, shortly after William Penn's return to Pennsylvania, the act was passed the repeal of the first section of which is now proposed. It was the natural sequence of the laws to which I have already alluded. It assumes the duty of owners of improved lands to fence them, and purports to be "for preventing all disputes and differences that may arise through the neglect or insufficiency of fences in this Province," &c. It first requires that all corn-fields and grounds kept

for inclosures shall be well fenced; second, prescribes what shall constitute a sufficient fence; third, renders the landholder liable for damages to cattle occasioned by driving them out of fields not fenced as required; fourth, provides for the collection of damages by the landholder against the owner of cattle which may occasion injury to fields inclosed as required. This section was subsequently qualified, first, by the act of 17th of October, 1701, repealing the act for the restraining of swine referred to in the act of 1700; second, by the act of 10th of May, 1729, for the erection of pounds, by the sixth section of which so much of the act of 1700 as prescribes what shall constitute a lawful or sufficient fence is supplied by a new and different provision; third, by the act of 4th of March, 1763, concerning horses and sheep trespassing within this Province, which provided a different proceeding for the ascertaining and collection of damages occasioned by horses or sheep breaking into inclosures.

Such was the condition of this legislation at the termination of our provincial history. When, in 1776, the Province of Pennsylvania, with others, asserted its independence of the British crown "all authority being in any person under said King consequently ceased," \* \* \* and "the laws enacted by his representatives here became of no force or effect." It was, therefore, enacted by the General Assembly of the State of Pennsylvania on the 28th of January, 1777: "That each and every one of the laws or acts of General Assembly that were in force, and binding on the inhabitants of the said Province, on the 14th day of May last, shall be in force and binding on the inhabitants of this State from and after the 10th day of February next, as fully and effectually to all intents and purposes as if said laws and each of them had been enacted by this General Assembly." (1 Smith's Laws, p. 429.) Only so much then of the act of 1700, as was in force on the 14th day of May, 1776, unsupplied and unqualified by subsequent legislation, received the sanction of the State Government and became at all operative as a law of the State, and such portion derived its authority, not from its original enactment in 1700, but from its reenactment in 1777.

By the act of 13th April, 1807, the acts of 1729 and 1763 were expressly repealed, so far as they affected the counties of Philadelphia, Bucks, Chester, Northampton, Wayne, and Delaware; and this act of 1807 has since been extended to other counties in the State.

The act of 13th April, 1807, supplied the provisions of the act of 1763, for the collection of damages occasioned by stray cattle, horses, or sheep, but it did not supply that part of the act of 1729 which prescribed what should constitute a lawful and sufficient fence. Ordinarily, the repeal of an act which, like that of 1729, had repealed or supplied the provisions of a former act, would revive the provisions of such former act; but such revival implies previous life and efficacy, and these provisions of the act of 1700, defining what should constitute a lawful fence, not being in force on the 14th of May, 1776, received no sanction under the act of January 28, 1777, and never possessed any vitality under the State government. It was not, therefore, a subject of resuscitation, and the repeal of the act of 1729 left us without any statute prescribing the height and requisites of a lawful fence.

This, perhaps, is not of great importance, because, in 1795, while the act of 1829 was in force, it was ruled by Judge Addison that, independently of the statute, an action of trespass would be to recover dam-

ages occasioned by cattle entering an inclosure, although the fence might not conform to the requirements of the acts of Assembly, if the fence were such as would be called neighborly, sufficient to keep out cattle not breeding. (*Adams vs. McKinney*, Add., 258.) And since the act of 1729 was repealed by that of 1807, it was ruled by Judge Elwell that the fence necessary to sustain such an action is such a fence "as farmers of practical knowledge and experience would consider sufficient to protect their crops from injury from usually orderly cattle." (*Race vs. Snyder*, 30 Leg. Int., 381.)

The fact remains that the act of 1700 requires every man to fence his "corn-fields and grounds kept for inclosures," and this, after all, is the important pivotal fact upon which the matter we are considering turns, and upon which the repealing act of 1885 was undoubtedly intended to operate.

As I have already said, it was the law in England that whenever it became the duty of a man to fence his grounds, he could not recover damages which occurred by reason of his neglect to fence, and in the case of *Gregg vs. Gregg*, which originated in Damascus township in this county, the Supreme Court of this State distinctly recognized the common-law rule, which required every man to restrain his own cattle, and held him responsible for their intrusion upon the land of another, and recognized also the qualification of that rule already mentioned, and ruled that *because the act of 1700 imposed upon every man the duty to fence his improved lands*, one could not recover for damages occasioned by stray cattle to lands which were not fenced. (*Gregg vs. Gregg*, 55 Pa. St., 227.) The act of 1682, not having been in force on the 14th of May, 1776, could not be revived by the repeal of the first section of the act of 1700, but we should be remitted to the common law rule, and every owner of improved lands would be entitled to rely for protection upon the ideal fence which the law erects around his possessions. Every owner of cattle would be required to see that they did not trespass upon his neighbor's premises, and would be held responsible for any damages arising from his neglect so to restrain them.

The statutory rule to be repealed, and the common-law rule to be restored, are the exact opposite of each other. The statute says, if you desire protection against your neighbor's cattle—fence them out. The common law says, if you desire protection against liability for damages, caused by your cattle trespassing upon your neighbor's land—fence them in. Which rule is more desirable in such a community as ours, is for the people to judge. I am not here to advocate either side of the question. If the common law rule shall prevail, (and upon principle this is undoubtedly the rule, unless circumstances render it burdensome or inconvenient,) then you may throw down your fences and cultivate your lands close up to the public highways. No more noxious and unsightly weeds and bushes may be seen along the roadsides through your farms. Subject to the public use for purposes of highways, you have the right to use and enjoy the strips of land. In cases where this has been tried, this result is said to add much to the attractiveness of the country in appearance, besides bringing into use no inconsiderable amount of land, which had not simply lain waste, but had furnished opportunity for a prolific growth of harmful weeds. Whether it will, upon the whole, permit a saving in the general expense of fencing, and operate to the advantage of the community, you farmers must judge.

I have purposely discussed this question upon the assumption that the act of 1885 is constitutional, and in itself complete, so as to effect what I suppose it was intended to—as simply submitting to the people the option of remaining under a compulsory fence law, or restoring the common law rule. I have done so in order distinctly to present the issue which I supposed you desired to have me present.

But I ought not to leave this subject without calling attention to what seems to me a material defect in this act of 1885.

The act of 1807 relating to strays is the only existing act, I think, which makes special provision for ascertaining and securing the damages occasioned by stray cattle. It is the only act which gives, in effect, a lien upon such strays and permits them to be detained until the damages occasioned, by them are paid. This law was passed with reference to the conditions existing at the time. By the repeal of the first section of the act of 1700, it would become substantially a nullity. It provides a remedy in case one finds stray horses, cattle, or sheep upon his "improved and inclosed" land. In the appraisement of damages it requires that the appraisers shall have due regard to the sufficiency of the fence. What, then, shall be the remedy where crops upon an unfenced field are injured by the cattle of an irresponsible owner? What shall be done where injury is occasioned by stray cattle of an unknown owner? I would suggest that, in order to accomplish the full purpose intended by the repeal of the first section of the act of 1700, something further is needed, some legislation akin to that now relating to strays, which shall be adapted to the new conditions, and it is for you to consider whether it would be prudent to throw down your fences until you shall receive the protection of some act of this character.

As to the constitutionality of the act of 23d June, 1885, the occasion does not require of me the expression of an opinion—nor do I think such an expression would be entirely proper. An act of the Legislature of the State, it must be recognized, unless and until its own constitutionality shall be determined by some competent authority. That the Legislature cannot delegate to the people of any district its legislative functions is unquestionable.

Where, by the act of 27th April, 1846, the option was given to the people of certain counties to decide by ballot whether the sale of vinous or spirituous liquors should be permitted in such counties, the Supreme Court, by the agreement of a bare majority of the judges, held that this was such an attempt to delegate the legislative franchise as could not be sustained, and that the act was unconstitutional and void. (*Parker vs. Commonwealth*, 6 B., 507.)

By the act of 3d May, 1871, a similar option was conferred upon the electors of the Twenty-second ward of the city of Philadelphia, and the Supreme Court, by the concurrence of a bare majority of the judges, overruled *Parker vs. Commonwealth*, and held that this was not a delegation of the legislative function, and that the act was constitutional. In the opinion of the majority of the court, this language was used: "When the law came from the halls of legislation, it came a perfect law, mandatory in all its parts, prohibiting in this ward the sale of intoxicating liquors without license; commanding an election to be held every third year to ascertain the expediency of issuing licenses, and the fact of expediency or in expediency shall have been returned, when commanding that licenses shall issue or not issue. Then what did the vote decide? Clearly, not that the act should be a law or not be, for

the law already existed. Indeed, it was not delegated to the people to *decide* anything. They simply declared their views or wishes, and when they did so, it was the *fiat* of the law, not their vote, which commanded licenses to be issued or not to be issued." (*Locke's Appeal*, 72 Pa. St., 495-6.)

The act of 1885, in its first section, purports to repeal the first section of the act of 1700. In its second section, after providing for an election to be held by the qualified electors of the several counties, it directs that "if, upon a proper count of such ballots in any county, it shall appear that a majority thereof are in favor of repeal, this act shall forthwith take effect therein; but the same shall not take effect in any county of this Commonwealth until it has been ascertained that the provisions thereof are deemed expedient, and desired therein, by an election as hereinbefore provided." Whether such a power comes within the reasoning and ruling of *Locke's Appeal*, and whether it contravenes that clause in the Constitution which prohibits local or special legislation, are questions for judicial solution.

---

## THE FENCE LAWS OF PENNSYLVANIA.

---

By Hon. GEORGE W. HOOD, *Indiana, Pa.*

*An address at the Conneautville meeting.*

---

It was a fundamental principle of our law that every man must keep his cattle on his own land, and if they strayed away on to other people's grounds, he was liable for any damage they caused by the trespass.

At common law, it was necessary that every man should keep a constant watch over his animals; or, if he did not do this, to surround his land with a fence. The first and primary object of the fence was to keep his own animals in, and *not* to keep other people's out; and if any land-owner kept cattle, he was bound to erect a fence around his entire close, whether his neighbor kept any cattle or not; but, of course, the same rule applied to his neighbor, because, if *he* kept any, he must, also, surround his farm with a fence.

But it was discovered that two parallel fences would be useless, and would be attended with very considerable expense; and as one and the same fence would answer for adjoining proprietors, it was provided by statute, March 11, 1842, "That when any persons shall improve lands adjacent to each other, or when any person shall inclose any lands adjoining another's land already fenced in, so that any part of the first person's fence is between them; in both these cases, the charge of such division fence, as far as is inclosed on both sides, shall be equally borne and maintained by both parties."

By the same act, the auditors of the respective townships were made fence-viewers, whose duty it was, within four days after notice given, to view and examine any line fences, and to make out a certificate in writing, setting forth whether, in their opinion, the fence

of one which has already been built is sufficient; and, if not, what proportion of the expense of building a new, or repairing the old, fence should be borne by each party; and they should set forth the sum, if any, which, in their judgment, either one ought to pay to the other, in case he should neglect or refuse to repair or build his proportion of the fence—a copy of which certificate it was their duty to deliver to each of the parties; and, if any of the parties refused or failed, within ten days after a copy of the certificate of the viewers had been delivered to him, to proceed to repair or build the fence as required, the party aggrieved had the right to build the fence and bring suit against the delinquent party for value of the same, before any justice of the peace or alderman, and recover, as in action for work, labor, service rendered, and materials found.

It follows, therefore, that if any adjoining owner does not keep up his half of the partition fence, and my cattle got through and injured his crop, he has no redress against me, since his own neglect was, in part at least, the cause of his injury.

But, at common law, if my cattle escape through my neighbor's defective fence, and stray upon the lands of another, and there injure his crop, I am liable in damages to him, though my own half of the fence is good, because, so far as third persons are concerned, I am bound to keep my cattle on my own land; and, if I have any redress at all, it is against my neighbor, who failed to keep up his part of the partition fence.

At common law, also: If I turn my cattle into the road, and they wander upon the lands of another, or if some careless person, crossing my farm on a hunting or a fishing excursion, leave down my bars, and my cattle escape into the highway, and thence into my neighbor's grain-field, I am liable to him the damages they may cause. On the other hand, if you are driving your cattle along the road, and, without any fault of yours, they run upon the lands of another, and you drive them out as soon as you can, you are not responsible for the damage done, because you had a right to drive them along the highway, and if you exercised proper care and attention, you could do no more. The law recognizes a difference between being *lawfully* and *unlawfully* on the highway.

The common law is, as I have stated, that every man is bound to keep his cattle on his own land; and this *would* be the rule in this State, except for the acts of Assembly imposing duties upon land-owners other than those of the English common law.

Under the provisions of the act of 1700, the owner of cattle is held liable for all damages caused to the owner of inclosed land, if he fenced according to law, and it has been held by our highest court that, unless improved lands are inclosed by a fence, the owner is in default, and cannot maintain trespass for damages by roving cattle; and the owners of improved lands must fence them, both to restrain his own cattle and to shut out the roving cattle of his neighbors. (*Vide* Gregg vs. Gregg, 55 Penna. State Report, page 227.)

In Pennsylvania, the law requires the fence to be "at least five feet high, of sufficient rail or logs, and close at the bottom." And to entitle a farmer to recover for the damage done by stray cattle, it is only necessary that his fence be such as men of practical knowledge and experience would consider sufficient to protect the crops from injury by orderly cattle.

If adjoining land-owners agree not to make any common division

fence, each is liable to the other for the trespass of his cattle; but where a fence has stood for twenty-one years, one of the owners cannot remove it without the consent of the other; neither has he any ownership in the materials of the part erected by himself; and where one party unlawfully removes a portion of a partition fence and sets it upon his own ground, this does not authorize the other to fence up to it on his neighbor's land. Neither can one of the owners of adjacent *unimproved* land call upon the other to contribute to the charge of a division fence. The duty to maintain partition fences exists where both parties improve their lands. It would certainly be unjust to make a man whose lands are in woods and not improved, and on which he raises no crops, to pay expenses of maintaining and building a fence which can be of no possible benefit to him. Hence the policy of our law to compel those *only* who are benefited by the fence to either build it or be liable for delinquency in not building it.

*Aside* from this, however, no man is compelled to build or keep in repair a partition fence on the line between him and his neighbor. If he prefers it, he can have his own fence, but he must put it on his own ground, and maintain and keep it in repair at his own expense, and if cattle break through his close and enter upon the lands of another, he is liable for the damage they do. So, on the other hand, his neighbor can have his own fence also, but he, too, must build on his own ground, and will alike be liable in damages if his animals break over his close.

If a division line between two farms passes through a wood-lot, neither of the owners is obliged to erect a fence; but if either owner allows his cattle to pasture in the woods, he must not let them pass the boundaries of his own land, or he will be responsible.

As to fences along the line of railroads, the law is somewhat different. A railroad company is not bound to fence its road, and it is not liable to owners of stray cattle killed thereon. *Neither* is a railroad company liable for value of cattle killed on its track, although they escape from a properly fenced inclosure, without the knowledge of the owner, and were killed at the intersection of a public highway. And when a railroad company, in purchasing the right of way, binds itself to fence the road through the other party's land, but neglects to do so, if the cattle of the latter stray upon the track and are killed, the owner cannot recover for the injury in an action for the wrong or injury done. His only remedy, if any he had, would be on his contract, to recover the loss of his cattle. Railroad companies are not bound to pay for losses, unless incurred by actual negligence, and if cattle *unlawfully* stray upon their track, and are killed, the owner must suffer the consequences, because he should have kept his cattle on his own lot, and not allowed them to stray away upon other lands.

It is, perhaps, proper for me to observe that it has been contended in some of the States of the Union, that the common-law rule does not, and never did, apply to them. That the American common law, founded upon decisions recognizing the customs, which was the result of a condition of things quite different from those which existed in the mother-country, had established the converse of the rule, that the owner of cattle must fence them in; that the common law of England was only adopted so far as it was applicable to the new State; that, as far back in the past as the rule itself can be traced, land in England was inclosed wherever cultivated; that inclosed fields and tracts of

land were the rule, and open land the exception, whilst in America the opposite condition of things existed.

But, from the beginning of the settlements in America by our forefathers, it was a well-recognized necessity that he who cultivated lands must protect his crops from trespass, whether from wild or domestic animals, by proper fences.

The common law is the basis of our jurisprudence only so far as it is applicable to the condition of society in the State by which it is adopted; and whilst it remains difficult, from the American cases, to deduce an invariable rule as to the applicability of this common-law principle that the owner of animals must keep them inclosed, and that there is not only a lack of harmony among the courts of all the States upon the proposition, but, in some instances, the decisions of the courts of last resort in the same States are at variance one with another; yet, in our own State, I think that the Supreme Court in the case of *Gregg vs. Gregg*, reported in 55 Pa. St. R., page 227, which is a ruling case on the subject, and which seems to be regarded as the law up to the present time, is sufficient warrant for us to say that, in the absence of any statutory provision, the common-law rule would be in force in Pennsylvania.

A careful examination of the fence laws of a large number of States in the Union shows that many of them are no better off than we are, many of the laws enacted being very similar to our own.

*In Alabama*—All fences must be five feet high, and strong enough to turn stock.

*In Arkansas*—The sufficiency of any fence may be determined by viewers summoned to examine it.

*In California*—A fence of stone, four and one half feet high, and of other material, five feet high.

*In Connecticut*—A rail fence four and one half, or a stone wall four, feet high.

*In Delaware*—Good fence four and one half feet high, of wood, stone, or well-set thorn hedges or ditch.

*In Georgia*—Worm fences or ditches must be five feet high, or deep, as the case may be, and other fences same height.

*In Illinois*—Walls, ditches, or fences five feet high, and sufficient to inclose and restrain sheep.

*In Indiana*—Any structure in the nature of a fence, which is such as good husbandmen generally keep, and shall, on the testimony of skillful men, appear to be sufficient.

*In Iowa*—A three-rail or board fence, with posts not more than ten feet apart where rails, and eight feet where boards, are used, or any other fence which, in the opinion of the fence-viewers, may be deemed equivalent thereto.

*In Kansas*—Post, or boards, or rails, hedge, ditch, palisades, post and wire, at least four and one half feet high, and sufficiently close, or stone walls at least four feet high.

*In Kentucky*—Every strong, sound fence, five feet high, and close enough to restrain stock, or a stone wall four and one half feet high.

*In Maine and Massachusetts*—All fences four feet high, of rails, boards, timber, or stone walls, in good repair and sufficiently close to turn stock, or such other fences as the fence-viewers deem equivalent.

*In Michigan and Minnesota*—The statute is the same, except that the standard of height is four and one half feet.

*In Mississippi*—All fences five feet high, substantially and closely built of plank, pickets, or other good material, or hedges sufficiently strong and close to exclude domestic animals of ordinary habits and disposition.

*In Missouri*—Fences sufficiently close to restrain domestic animals, five feet high, of posts and rails, or palisades, hedge or turf, or worm fence with corners locked by strong rails, posts, or stakes.

*In Nebraska*—A rail fence, six rails high, post and rails or boards; three rails or boards one inch thick and at least five inches wide, or post and four wires, (No. 9 wire,) and all at least five and one half feet high, or the fence called "Warner's Patent," four and one half feet high.

*In New Hampshire*—The same as in Maine and Massachusetts.

*In New Jersey*—All fences are lawful, which, being of post and rails, timber, boards, brick, or stone walls, are four feet two inches high; all other fences four feet six inches in height, and so close as to prevent horses and neat cattle from going through or under the same, and partition fences between improved lands must be close and low enough to turn sheep.

*In Rhode Island*—A hedge with a ditch three feet deep, a hedge without a ditch four feet high, a stone wall four feet high, and all other kinds of fences four and one half feet high, in good repair, and sufficiently close.

*In South Carolina*—All fences strongly and closely made, of rails, boards, or posts and rails, or line hedges, five feet high.

*In Tennessee*—A sufficient fence, five feet high, and so close from the earth as to prevent the passing through, or under, of hogs.

*In Vermont*—Similar to that of Maine, except the standard of height is four and one half feet.

*In Virginia*—Every fence five feet high, well built, and sufficiently close and near the ground to restrain horses, cattle, sheep, hogs, and goats.

*In New York*—The statute leaves the whole matter of the character of the fence to be determined by the electors of each town at town meetings.

*In North Carolina*—Similar provisions leave the matter to the determination of the voters of the several localities, in elections duly held, except that there is a general statute, by the terms of which each planter is compelled to protect his cultivated fields by a fence at least five feet high.

Thus it will be seen, by the hasty examination of the fence laws of some twenty-seven States in the Union, outside of our own, that vari-

ous kinds of fences are authorized by statutory regulation, the more liberal being in the Western or new States, and thereby making legal any kind of a fence which would serve to keep domestic animals within the inclosure.

The Pennsylvania Legislature of 1885 was doubtless in favor of repealing the act of 1700, but the bill coming before the House asking for its repeal as to but one county in the State, naturally drew forth more or less opposition from those counties opposed to its repeal, and the final result was, which was brought about by an amendment to the bill, that the provisions of the act of 1885, repealing the act of 1700, should not apply to any county in the State, unless the county commissioners request the sheriff to publish the act therein, with, and in the same manner, that notices of the next general election shall be published; and for the purpose of ascertaining whether or not the provisions of the act are deemed expedient and desired in such county, and the qualified electors shall determine by a vote thereof, whether the act shall take effect in such county.

Whilst this provision in the act puts it in the power of any or every county in the Commonwealth to repeal the act of 1700, so far as it relates to such county, yet practically the law *is* not and *will* not be repealed. The very thing intended to be accomplished by the act will not be attained. County commissioners will not take upon themselves the responsibility of requesting an election, and when an election is held, the various notions and prejudices of the people regarding the old law will enter into their actions at the polls, and, in a majority of instances, the law will not be repealed.

The act of 1700 was passed when our country was new; when it was much more difficult to fence than now, and when cattle roamed at large through every woodland and forest, wherever pasturage could be obtained. The act was only passed for the benefit of the "provinces and the counties annexed," and it has *certainly* long since outlived its usefulness.

It seems to me that if the act of 1700 was stricken from our statute books, and the common law rule in force in our State, that every farmer must fence his land to keep his cattle in, or be responsible for the damage they may do, that it would be much better than with the act in force. The law as to partition fences remaining the same, the farmer would be at liberty to build any kind of a fence that would keep his cattle within his own close.

---

## THE ROAD, FENCE, AND TRESPASS LAWS, AS THEY AFFECT THE FARMER.

By H. J. VANKIRK, Esq., *Washington, Pa.*

*An address delivered at the Washington meeting.*

---

I have been invited to say something on this occasion in regard to the laws relating to fences, roads, and trespass, as they affect the farmers.

In considering these subjects, I will confine myself to this county principally, because many of our general laws, either by express proviso or by special acts, do not operate in all the counties of the State.

While the matter of fences, roads, and trespass is of very great importance to all our citizens, the farmer is more deeply interested than all others; and it is eminently proper that such subjects should be considered at an annual meeting of your institute.

Although these matters are of interest and importance, I am fearful that I will be unable to make them interesting to you. I will not attempt to beautify or embellish subjects so old and so dry, but will confine myself to the presentation of such phases of our laws relative to these subjects as I consider most important.

Fences, roads, and trespass followed in the wake of the settlement and growth of our State and county.

When the early settlers increased, and their wants increased, it became necessary to protect their inclosures, make roads, and punish encroachments upon their rights.

I will first take up the subject of fences.

The earliest law on this subject now claimed to be in force was passed in the year 1700. It provides that "all corn-fields and grounds kept for inclosures, within the said Province, and counties annexed, shall be well fenced with fence at least five feet high, of sufficient rail or logs, and close at the bottom."

This law continued in force until May 10, 1729, when a general law was passed, the sixth section of which provides that "all fences shall be esteemed lawful or sufficient, though they do not close at the bottom, so that the distance from the ground to the bottom thereof exceed not nine inches, and that they be four and a half feet high, and not under."

This law continued in force until 1784, when a special law was passed for Bedford, Washington, Westmoreland, Northumberland, and Fayette counties. In order that you may understand how particular the early settlers were, I will give you their description of what a lawful fence should be: "All worm fences shall be four and a half feet high, with sufficient stakes and riders added thereon; the under rail not more than five inches from the ground; first four rails not over five inches between the rails, and four feet worm."

On the 28th March, 1808, a special act was passed for Washington and Allegheny counties, repealing the act of 1784. The second section of the act of 1808, which is still in force in this county, reads as follows: "That all fences shall be deemed lawful which are four and one half feet high, and in the judgment of such referees, the fence or fences viewed by them shall be such in other respects as one generally constructed and deemed a sufficient fence within their respective townships."

A lawful fence now in this county is one that is four and one half feet high. There is nothing in the law as to how it shall be made, or of what materials. It must be four and one half feet high, and in other respects it must be neighborly, that is, such as are made and deemed sufficient in the respective townships of the county.

This law has been in force in this county for more than three quarters of a century, and I believe it is still in force in Allegheny county.

A word now about line fences. The law on this subject was passed

March 11, 1842. The third section provides in this way: "When any two persons shall improve lands adjacent to each other, or where any person shall inclose land adjoining to another's land already fenced in, so that any part of the first person's fence becomes the partition fence between them, in both these cases, the charge of such division fence, so far as is inclosed on both sides, shall be equally borne and maintained by both parties."

One of the owners of adjacent unimproved lands cannot call upon the other to contribute to the expense of a division fence between them.

An adjoining owner is not bound to join in a division fence; he may set his fence on his own land, and if his neighbor extends his fence across the line to join it, it is a trespass.

But if one party set his fence on the line, the other may join a panel of his fence to it, and when the charge assessed by the fence, viewers has been settled or arranged by the parties, it becomes common property, and shall thereafter be kept up at the joint expense of both parties.

If my land is not fenced in, and my neighbor incloses his land, I cannot be called on to contribute towards the expense of any part of his fence, simply because it does not become a partition fence. But if my land is inclosed, and my neighbors inclose his land adjoining mine, so that a part of my fence becomes a division fence between us, then my neighbor must be at half the expense of such division fence.

A division fence of twenty-one years' standing, though crooked, is the true boundary, notwithstanding the deeds of both parties call for a straight line. Where one adjoining owner puts up a partition fence on the boundary line for half the distance, and the other refuses to complete it, he cannot recover for a trespass upon his land by his neighbor's cattle.

Under this act, provision is made for viewing line fences by the township auditors, who are authorized to act as fence-viewers.

On five days' notice to the fence-viewers, they are required to meet and examine any line fence, such as I have already indicated, and determine whether the fence, if one has been already built, is sufficient, and if not, what proportion of the expense of building a new one or repairing the old fence should be borne by each party, and make out a certificate setting forth the sum which each party ought to pay to the other, in case he shall repair or build his proportion of the fence. If the party who is delinquent shall not, within ten days after receiving a copy of the viewers' certificate, proceed to repair or build the fence in a reasonable time, the other party may repair or build the fence, and bring suit before a justice of the peace for the price of the fence.

The viewers are to receive one dollar per day for their services, to be paid by the delinquent party, or in equal sums by each, as the viewers may determine. The viewers cannot be required to view any fence between the first day of November and the first day of April following.

Before leaving the subject of fences, I desire to again refer to the general fence law. I have already referred to the oldest law on the subject, that of 1700, by which the height of a lawful fence is fixed at five feet; and I have also stated that the sixth section of the act of May 10, 1729, fixes the height of a lawful fence at four and a half feet, &c. It is manifest that the two different fences described in these acts cannot both be lawful fences at the same time. One is

lawful, and the other is not. Where two statutes differ, the old one gives place to the new one.

As I have not been able to find any act repealing the sixth section of the act of 1729, my opinion is that it is still in force throughout the State, except where it has been repealed as to certain counties; and that a lawful fence in this State, outside of the excepted counties, is such a one as is defined by this act, to wit: "All fences shall be esteemed lawful or sufficient, though they do not close at the bottom, so that the distance from the ground to the bottom thereof exceed not nine inches, and that they be four and a half feet high, and not under."

This view is sustained by Judge Strong, in the case of *Gregg vs. Gregg*, 5 P. F. S., page 227. In delivering the opinion of the court in this case, in 1867, in referring to the act of 1700, he says: "Some of the provisions of this section were subsequently changed by the act of 1729, and others still later. Thus the required height of the fences was reduced. The requisition that they should be close at the bottom was taken away."

The act of 1729 is omitted in Brightly's Purdon's Digest of our laws, and the act of 1700 retained. I might say, in reference to this omission, as the mountaineer in Georgia said about his wound received in the late war. A candidate for Congress met him one day, and said to him, "You were wounded in the late war, were you not?" He replied: "Yes, I *wur*; I was shot in the leg at Vicksburg, and I have not found out to this day who shot me, nor what he did it *fur*." I have not found out to this day what Brightly left out the act of 1729 for.

Although there is no great difference between the two kinds of fences required in these two acts, it is due to the people that they should know what law is in force within the Commonwealth.

A general act might be passed clearly defining what the law is.

If all the laws in relation to lawful fences (as is advocated by some of our farmers) were repealed, we would be thrown back upon the common law, the general rule of which is, that a man is not bound to fence against the cattle of others. Whether your fences were good, bad, or indifferent, or you had no fences at all, your neighbor would be liable for all damages done by the incursion of his cattle upon your premises.

Some are in favor of the passage of a law prohibiting cattle, &c., from running at large. There are objections to both of these propositions; but the time is coming when one or the other will be done.

We will now get off the fence, and take the public road.

The laws in this State, in regard to public roads, are exceedingly varied. There is no uniformity on the subject. We have our general road law, passed June 13, 1836; but almost every county in the State has had special laws passed, making certain changes in the general law.

The general road law requires the court of quarter sessions to appoint six viewers, upon petition, to view and lay out a public road. The number of viewers in many of the counties has been reduced to three. In Washington county, by act of March 30, 1859, the number of viewers was reduced to three, and certain other changes were made in the law.

Under the general law, the breadth of a public road was not to exceed fifty feet. The usual width is thirty-three feet. This act provided

that owners of land through which a road had been opened, may, within one year thereafter, apply by petition to the court of quarter sessions for a view to assess the damages occasioned by the road.

Under the special act for this county, the original viewers are authorized to assess the damages, and any party aggrieved may present a petition for a review of the damages. It is also made the duty of the supervisors of the several townships in the county, and the street commissioners of incorporated boroughs, to keep in repair all bridges built, or that may hereafter be built, by the commissioners of the county. And it is made the duty of the county commissioners, upon information furnished them, that any bridge built by the county has been damaged or destroyed by flood or other casualty, or by natural decay become unsafe, so as to be too heavy an expense for the township to repair or rebuild, to examine the same, and if they are satisfied such is the case, they are to proceed to repair or rebuild the same.

The persons interested in the road shall give timely notice to at least one of the county commissioners of the time and place of holding all views and reviews under this special act. The viewers must be sworn or affirmed. They must examine the route of the proposed road; they must have respect to the shortest distance and the best ground, so as to do the least injury to private property. When practicable, the grade of the road is not to exceed five degrees, except in crossing ravines and streams, where, by moderate filling, the grade may be kept within that limit.

The route between the terminal points is entirely for the viewers. No intermediate point can be designated by the court, nor can the termini of the road be changed by the viewers.

Nothing further need be said in reference to the preliminary steps to be taken in order to obtain a public road.

After a public road has been confirmed, it is then to be opened. This duty devolves upon the supervisors of the respective townships. The order to open will be issued after the proceedings are confirmed by the court.

After receiving the order to open, the supervisors, as soon as practicable, are to effectually open the road and keep it in repair. And the law says further: "And all public roads or highways made, or to be made, shall at all seasons be kept clear of all impediments to easy and convenient passing and traveling, at the expense of the respective townships, as the law shall direct."

It is the duty of the supervisors to open the road on the location as confirmed by the court. If they change the location when they open the road, a new supervisor cannot alter it, on the ground that it was opened in a wrong place. All authority under the order to open was exhausted by the action of those to whom it is directed, and cannot be resumed by others.

The only way to change the location is by a new proceeding under the road law.

When a track has once been made, and used by the public, the supervisors cannot make another location, but they can extend it to its legal breadth from the center of the beaten track so used.

Supervisors are indictable for neglecting or refusing to open and repair the public roads.

Townships, like other municipal corporations, must keep their public roads in a safe condition. If a road through a township is so dangerous, by reason of its proximity to a precipice, that common prudence

requires extra precaution, in order to secure safety to travelers, the township is bound to use such precaution, and the omission to do so would be negligence.

A township is bound to erect walls or barriers along the sides of its roads where they are unsafe, although it is not vested with power to tax itself for road purposes beyond one percentum on the county valuation.

If a township fails to keep its roads in such condition and repair as may be necessary for the convenience and safety of the traveling public, such township is guilty of negligence, and liable for injuries resulting therefrom.

This is the settled law in Pennsylvania, as we have it laid down in numerous decisions of our Supreme Court.

It might be well for the taxpayers of the different townships to bear this in mind, and see to it, that their public roads are up to the requirements of the law. Two of the townships of this county have lately been mulcted in damages for alleged failure to keep their roads in a safe condition.

Under the act relating to county and township rates and levies, passed April 15, 1834, the taxpayers may work out their road taxes on the roads, and cannot be required to pay them in cash, unless they fail to work them out on the roads after the supervisors have given them an opportunity to do so.

This statement that the road taxes cannot be collected in money until after the taxpayers have had an opportunity to work them out on the roads, will be somewhat startling to many of our people, because they have conceived the idea that, under the law, they can collect part in cash, and allow the balance to be worked out on the roads. The thirty-fourth section of the act of 1834 shows the erroneous character of this opinion. This section is as follows:

"*Provided*, That before issuing the duplicate and warrant for the collection of road taxes, it shall be the duty of the supervisors of every township to give notice to all persons rated for such taxes, by advertisement or otherwise, to attend at such times and places as such supervisors may direct, so as to give such persons full opportunity to work out their respective taxes."

This section has been considered and passed upon by the Supreme Court of this State in the case of *Miller vs. Gorman*, 38 Pa. St., 309, and in *Childs vs. Brown Township*, 40 Pa. St., 332, and in both cases the court held the law to be just as I have stated it.

This question might be asked: If all road taxes can be worked out on the roads, where is the money to come from to pay the supervisors and other expenses?

The answer is this: The seventh section of the act of 28th February, 1835, provides that it shall be lawful for the supervisors of any township to levy a rate or assessment, and collect the same, for the purpose of discharging any just debt due a former supervisor. This tax must be paid in money, and cannot be worked out. And in *Childs vs. Brown Township*, already cited, Strong, J., in delivering the opinion of the court, says: "Township taxes are not all paid in labor, nor is it anticipated that they will be; a considerable portion is collected in money. Were it not so, it would be impossible to discharge many municipal obligations. It may be conceded that supervisors cannot make a contract, the effect of which must be to deprive taxpayers of the privilege to work out their taxes."

Townships, like individuals, must pay their just debts. Sometimes they have to pay damages resulting from a failure to keep their roads in a safe condition. For all such purposes, the townships must levy a special tax, to be paid in money and not in work.

In some of the counties of this State an act is in force, known here as the East Bethlehem township road law. It provides, as you all know, for letting out the roads by contract, and for collecting the road taxes in money.

This special law has been in operation in twenty-one different townships in this county; but, from some cause, it lost favor with some of our people, and has been repealed in eleven townships, and now remains in force in only ten townships.

With so many different laws in operation throughout the State, it is very difficult to secure the passage of a general law which would be more acceptable to the people than the acts of 1834 and 1836; the one in relation to the laying out and opening of roads, and the other as to the method of working out road taxes.

A general law might be framed so as to embody the best features of the acts of 1834 and 1836, with some additional provisions added, making the method of working roads as now provided in the old law more satisfactory to the people than it is now under that law.

Also, embody in the new law the best features of the East Bethlehem township law, making such alterations and amendments as experience has shown to be necessary.

Under this duplex law, the people could be allowed to determine, by a popular vote, which method they preferred; and, after an acceptance of the one method or the other, it would remain in force in the township until such time as the new act provided, when a change could be made as directed by the act.

I merely make the suggestion for your consideration. I feel satisfied that such a law could be framed that would be constitutional and valid.

Before dismissing this subject, I wish to say that there is a very important duty imposed on the supervisors under our general law; I mean the duty of putting up finger-boards at all important cross-roads, indicating, in a legible manner, the places to which the roads lead, together with the distance. This requirement of the law is very often neglected. Supervisors who fail to discharge this duty are liable to a fine of ten dollars.

Without these finger-boards, persons often find themselves in a very unpleasant dilemma, and cannot tell which road they should take to reach their destination.

A traveler once found himself in such a predicament, and sought information from a pert boy. He asked the boy if he could tell him the road to Jamestown. The boy replied, "Yes, sir-ee! you just follow your nose, and keep on the right road, and you can't miss it!" Remedy this trouble by having proper finger-boards put up as the law directs.

I will now call your attention to the subject of trespass.

There are certain trespasses which the law punishes as misdemeanors, namely:

To wilfully or maliciously injure or destroy any fruit or ornamental trees, shrub, plant or grape-vines, growing in any orchard, garden, or inclosure.

To knowingly cut timber trees on the land of another without the owner's consent.

To knowingly and maliciously cut, alter, or remove a boundary tree, or other land-mark.

To wilfully and maliciously kill, maim, or disfigure any horses, cattle, or other domestic animals, or to expose them for such purpose.

To maliciously or wantonly break or throw down any post and rail or other fence erected for the inclosure of land, or break and carry away the materials thereof.

To wilfully take and carry away vegetables, fruit, plants, fruit or ornamental trees, vines, or shrubs, whether attached to the soil or not.

The foregoing offences are severely punished.

Farmers are more annoyed by trespasses of a milder type than those which the law has defined to be a misdemeanor.

Such as trespasses by roving cattle, or by neighboring cattle breaking into another's inclosures, and injuring growing crops.

Sometimes by an adjoining owner in moving a line fence over on his neighbor's land several feet without asking his neighbor's help or permission.

Sometimes by persons entering upon the land of another without his consent, and trampling down his grain and grass, and leaving the bars down or gates open.

I need scarcely say what you all know so well, that I have no right to pass over the land of another without permission for any purpose; whether for the purpose of hunting, or for the purpose of reaching my neighbor's house by a shorter route. But our farmers are not in the habit of forbidding their neighbors to pass over their land on foot, when they do so without causing any injury whatever.

For all these trespasses the law provides an adequate remedy. But I will content myself with a reference to trespasses by horses, cattle, and swine, and the law relating to them.

As there is no law in this county prohibiting these animals from running at large, they can lawfully run in the public road.

If any of these animals are found in your inclosures trespassing you can seek redress in three different ways.

*First.* Under the stray laws of 1807 and 1819, as a rule, persons will not seek redress in this way, because too much time has to elapse before the strays can be disposed of, in case the owner does not appear and settle the damage and costs.

*Second.* Under the act of March 27, 1808, in force in this county. It provides that all damages done by horses, horned cattle, and swine shall be determined by referees upon actual view. The remedy under this act is not very practicable, because it does not say how many referees there shall be, or how, when, or by whom appointed. If redress is sought under this act, then the plaintiff's fences must be neighborlike, and four feet and a half high.

*Third.* The common law remedy by action of trespass against the owner. If, in this form of action, the defendant could raise any question about fences, he could ask no more than that they should be neighborly, and such as are lawful in this county under the act of 1808.

The amount of damages to be recovered for the various trespasses upon the plaintiff's land will depend, of course, upon the nature of the injury.

Now, gentlemen, I think I have said enough upon these subjects.

and the laws relating to them, to meet the requirements of this occasion. If my talk has afforded you but little entertainment, I trust that some little profit may be derived from what has been said.

The President, JOHN McDOWELL, Esq., having declared the topic open for general discussion—

Mr. —: Suppose a line fence has become zigzagged or crooked, and over a little off the true line, would that really and truly be the boundary line between the two men, after twenty years, and could they be held by it?

Hon. H. J. VANKIRK: I answer that they could. If you live alongside of a neighbor who is very tenacious and sort of bull-headed, and he gets a little the advantage—has more land on his side by this crooked line fence than you have—why, he can hold you right to that line. I have had in my experience some two or three cases just like that. But I believe, as a rule, the farmers of this county don't insist on the right the law would really give them. They do not claim in that way. They prefer to have a straight line. The great desire of all the people is to make their lines straight. Our farmers in this county have too many lines, and it is not good policy to increase them. If we could be reduced down to squares or right-angled tracts of land, it would be a great deal better.

JOHN M. MILLER: There is a question has arisen with regard to the road law. It is this: According to the general law the road tax is only collectible in work. Now the question is this: Supposing a tax is levied upon a district and it is greater than is needed to keep the roads in repair, is there any portion of that tax collectible, by law, in cash? That is a question I would like to get answered.

Mr. VANKIRK: I can answer that question very easily. This general road law of '36 don't provide any method by which any portion of the road taxes can be collected in money. If you get it in money it is accidental. You cannot collect it under any legal process until after you have given the taxpayer an opportunity to work it out on the roads. If the supervisors don't give an opportunity to work it out, they are at the end of their string. They cannot enforce the payment of it in money.

Mr. HAPPER: What provision is made for the payment of the supervisors?

Mr. VANKIRK: There is no provision. If there is money to be paid out, they are to depend for it, or for their compensation, on money coming in where persons prefer to pay their taxes instead of working them out. But the law has a provision that every man must have an opportunity to work out his road taxes before he can be compelled to pay them in cash. I have thought of that same difficulty you suggest; but, in examining the decisions in relation to this road law, I have been unable to see about it.

Mr. OLIVER: When the supervisors lay a certain tax to be worked out, and a certain tax to be paid in money, can they compel the citizens to do it? They lay certain taxes to be worked out, and certain taxes to be paid in money.

Mr. VANKIRK: All I have got to say about that is, that it is contrary to law. All the people of the township simply acquiesce in it. I will just simply remark. I believe as Judge Black remarked on the bench here, in regard to a practice that sprung up in this county with regard to our road law. One of the attorneys asked a certain thing of Judge Black. "Why," he says to him, "Mr. Blank, I cannot do that, it is contrary to law." "Why," says he, "if your Honor please, such has been the invariable practice of this court for the last twenty-five years." "Well," says Judge Black, "it has been in violation of the act of Assembly for that length of time." So I say, it was simply because the people of the township permitted it to be done that it was done.

Mr. STEVENSON: I would like to know what the law would define as opportunity—one notice, or a number of notices to work on the road. Under our old law, the supervisor notified us on a certain day to go to work. Would it be necessary to renew the notice, or would one be sufficient?

Mr. VANKIRK: My reply would be this—probably some of you gentlemen here would be just as capable of answering it as I am—but, as I understand the law, each taxpayer must have an opportunity to work out his taxes; but, if he receives notice to-day to go to work on the roads, and goes, and the supervisor gets through with the road he is working at inside of one day, or two, and lets the men scatter and go home, and all the taxes are not worked out in those two days, he must continue to give them an opportunity afterwards until he works all his taxes out. This is as I understand the law.

Mr. AILES: I was going to ask a question similar to the one that has been asked: what amount of notice should a man have? Suppose his tax is \$20, how often would he have to be notified?

Mr. VANKIRK: Well I think I have answered that question, probably, already. I will reply to Mr. Ailes, I think he would have to have notice as often as would require him to work his taxes out: it might be twice, or three times, or four times, at three or four different places, or as many different places as are necessary to work the tax out. I think it is manifest to you farmers that one notice would be sufficient. The supervisor might have a job on a certain day at a certain place, and finish that in one day; you had a team and one or two hands there, and worked out \$5 of your tax; now, there are \$15 of your taxes back yet; you must have an opportunity given you to work that out. You must go to another place and work out \$5 more, and so on.

J. P. MILLER: I suppose it is legal in this meeting for an attorney to say a word. I

would take issue with Brother Vankirk on this question. In answer to Mr. Oliver, he stated there was no method by which a tax could be levied and collected in money. Now, I have not examined the road law very particularly of late, but my impression is there is a provision by which road taxes can be levied and collected in money, that is, to pay off a debt. And that would provide for the deficiency suggested by Mr. Happer, provided the supervisors were willing to wait until the next year for their pay. My recollection is, one section of the act of Assembly provides that taxes may be levied for paying expenses. Now, for instance, it would be necessary to repair a road where an injury was done by a flood, and the taxes had all been worked out. Now that damage must be repaired immediately in order to render the road passable; and if there was no provision by which labor could be employed, I don't see how you could get your road in order. For instance, during the great storm of last winter a great many of the roads were blocked up; and in a great many cases the taxes were already worked out. Now, how were the supervisors to get those roads open if there were no means by which labor could be employed, which had to be paid in cash? The labor employed in repairing those roads would be a debt against the township, and it would be the duty of the supervisors to levy a tax and pay that in money. There is another thought suggested itself to my mind during the reading of the paper. I would like to know whether Mr. Vankirk has examined the question as to whether the act of 1700 is in force in this county. No doubt you are all aware that at the last session of the Legislature there was an act of Assembly passed, providing for the submission of the question to the voters of the county to vote upon the repeal of the act of 1700, so we might be thrown back on the common law when a man would have to fence against his own stock instead of fencing against his neighbor's stock. The time has come when the farmers of this county certainly should endeavor to get rid of the great burden put on them by keeping up fences. I hope to see the day when we will have no fences at all in this county. It is an immense tax and disfigures the landscape.

Mr. VANKIRK: I hope the gentleman didn't come to the conclusion that I was not aware of the fact that a tax could be collected in a township for the payment of its indebtedness. We all know the fact that a township may be compelled under a *mandamus* execution to levy a tax for the payment of its indebtedness; but the difficulty suggested by him where flood occasioned great damage to a road, or where there isn't tax sufficient levied to open a new road, it is their duty to levy additional taxes for these purposes, and the only purpose for which a township can enforce the payment of taxes in money is to pay indebtedness, not taxes levied for the working and repair of the public roads in the township. I was perfectly aware of the fact; I was speaking of road taxes in relation to the management of the roads. I was not referring to the fact that a township had or not power to levy taxes for the payment of debts. The law requires and compels municipal corporations, as well as individuals, to be honest and pay their debts, and provides the manner in which it can be done. But I say again, if you levy road taxes under the general road law, you cannot compel the payment of such road tax in money until you have given the taxpayers an opportunity to work it out on the roads. Now, in regard to the act of 1700. I have examined these different laws as carefully as I possibly could; I spent a great deal of time examining these different acts of Assembly; I took them *seriatim* going from one to another, back and back until I went over the whole scope of the pamphlet laws of Pennsylvania, and I say—and what I say I am sustained in by Judge Strong in the case which I called attention to in my paper—that the act of 1700 has been changed by the act of 1729; and that opinion of Judge Strong's was delivered in 1867. I know of no act of Assembly since that time that has made any change in the law relating to this subject. I believe confidently that the act of 1700 in relation to roads is not in force in Pennsylvania, but the sixth section of the act of 1729 is.

Mr. McFARLAND: I am from Allegheny county. It requires quite an effort for me to attend this meeting. I have learned something. You have a cheaper way of getting legal advice, a nicer way of pumping the lawyers than we have, and I will embrace the opportunity, as it might benefit some of my neighbors. What would be necessary to prevent the peaceable possession of this crooked line? Would notification of a survey be sufficient to prevent this peaceable possession?

Mr. VANKIRK: Well, there are one or two methods. Before the statute of limitations would set up a bar—twenty-one years—he could call upon his neighbor to adjust the line, and try to have it run and adjust it; and before the twenty-one years ran around, if some of his land was inclosed by his neighbor, he might bring an action in ejectment. This would have to be done within twenty years, before the title by peaceable possession would accrue. Those are the only two methods I can think of. I think a party has the means in his own hands for preventing a difficulty of that kind. If his neighbor has got his land inclosed by a crooked fence, he might bring an action of ejectment or serve a notice upon him he wanted.

Mr. McFARLAND: That would prevent peaceable possession?

Mr. VANKIRK: Yes, sir; it would be notice to him, he claimed the land up to a certain point.

Mr. McFARLAND: A party bought an adjoining farm, and when the farm was surveyed, they run two rods on an adjoining farm; and the party that sold to this party that I speak of and the party they run over on quarreled, as parties often do; but the party who bought the farm—these two rods were surveyed into him and he had to pay for them—does that prevent the party claiming the two rods from having peaceable possession, if he had it twenty-one years?

Mr. VANKIRK: No, sir.

Mr. DINSMORE: Our supervisor is elected in the township to work the roads, and he is compelled to oversee the district he is in. I want to know whether the supervisor can be compelled to keep these roads in proper condition, and yet have no way provided to receive compensation for his labors. As I understand Mr. Vankirk, we can't collect a single dollar off the township in money. Where are we going to get our compensation? I ask that because I have been in that position for several years myself.

Mr. VANKIRK: I don't object to giving advice within the scope of the discussion of these questions, and I don't say that I am infallible in my opinions at all; but I do give it as my opinion that I don't see how the supervisors will get their compensation unless there are some good, easy men in the township who will pay their taxes in money instead of working them out. Of course, if the township becomes indebted to him, after his accounts are passed upon by the auditors, he has his recourse against the township, an action for debt against them, and compel them to pay. But so far as I have been able to understand the law, I can find no provision in the whole law—there is nothing—no special act for this county—making any provision other than what I have already spoken of.

---

### AN ADDRESS.

---

By Hon. JOHN F. DRAVO, *at the Washington meeting.*

---

Mr. PRESIDENT: I am very much at sea, and no little embarrassed. I never like to talk to a tired audience. Besides, I am present with you under very different impressions from what the meeting suggests. I supposed this was to be merely a local meeting, and you wanted only an informal talk. I find myself here amidst prepared essays. In addition to that I only came into possession of the programme since I arrived in town, and I find my name nowhere on the programme. I shall not detain you long.

After listening to the very carefully prepared essay or paper of the Hon. William S. Shellenberger, you must have been convinced that protectionists occupy a very limited margin; that the antagonisms of life meet them and the promulgation of their doctrine, and narrow them down to a very restricted platform. But it is so in life. In the heavens above us and in the earth beneath us, all around us in the realms of human life, and even in the domain of theology, as well as the material processes by which we are surrounded, we find the conflicting forces of antagonism. So free trade and protection antagonize each other. And after listening to the paper I have mentioned, the inquiry arises: Have we any ground to stand upon and contend for the doctrine that has been so beneficial to Americans—the doctrine of protection? We will have to depart somewhat from the circumstances of our positions for this purpose, and look a little away from the specific pursuits of life in which we are engaged. When the Creator declared man should earn his bread by the sweat of his face, he crowned labor with supreme dignity, the sweat of the face and of the hand uniting mental and physical forces for the subjugation of the world. The map of Washington county, with its lines of railroad, with its work-shops, and vast green fields and wealth of flocks, was not down on the map of Adam. When he first looked out upon this world, it was a barren world, so far as the created forces of human labor were concerned; and it was assigned to man, to human labor, to conquer those forces by which he was surrounded, and from the crude

material of the earth to form these homes, and build these institutions, and line these great thoroughfares with our iron ways. This was assigned to man, and hence labor occupies the highest dignity within the reach of man. Hence, in view of the importance of human labor as a factor in the progress of the human race, and lying back of our mental and physical development—a supreme and mighty factor in the evolution of the things by which we are surrounded—it became a matter of very great importance that labor should ever be invested with supreme dignity, to elevate man in his forward march. Hence, in this land of ours, in its multitudinous learning, there is apparently a reservation for some marked and wide-spread development of the human race. This broad freedom and this intense activity of human thought seem to be prophetic of some mighty uplifting of the human race. Hence, out of all these discoveries comes the American doctrine of the protection of labor, and not of capital. Now, why should American labor be protected? Leaving the general thought, I hasten on through to say a few words I desire to say. We affirm, protection is a sound policy, first, because it tends to the promotion of personal industry. Now, we want to get some broad and general ground upon which to found the doctrine of protection; not merely on the narrow platform of a particular calling or industry, but some broad platform as broad as the race, as broad as our country, reaching from ocean to ocean, and governing the activities and progress of the race with which we are connected.

We say the protection of American labor tends to the promotion of human development, and stands back of all human development, because, where industry is not the characteristic of a people, there is no progress, and there is very little of human virtue; but show me an industrious people, where every moment is utilized for the advancement of man's moral and intellectual interests, and I will show you a people of progress, and a people of virtue. And on this broad ground we found the doctrine of the protection of labor. The theory of protection has been misjudged and misapprehended, because it has been supposed that it was intended to subserve the interests of some particular class; to subserve capital, to subserve the interests of the iron-master, or of sheep husbandry. Not on such narrow lines, and on such a limited platform, do we found this doctrine, but on the broad principle of the very highest and best interests of the race. But why protect the labor of one country against the labor of another country? Is not this world the home of man, and is not man entitled to all the privileges and advantages that may come from the whole earth? Under certain conditions. That is the ground that the free-trader takes, and it looks very reasonable, and, in the abstract, it is reasonable, and if it were not that certain conditions change the force and character of the argument, it would be unanswerable. And first, we advocate the protection of the labor of one country against that of another upon the law of self-defense. Every man has the right to defend himself; he has the right, by the law of self-defense, to defend himself and protect his interests. Now, if all countries paid the same wages and gave to labor the same education, then free trade would be possible. But we find other countries oppress labor; we find other countries are binding on the shoulders of labor heavy burdens that it cannot bear, and hence we have the right, by the law of self-defense, to protect the labor of this country against those oppressive laws and measures by which the laborer is reduced to a recompense fifty per

cent. below that which is recognized in this country. Hence, the low wages paid in other countries makes it an imperative duty upon the legislative power of this country, by the law of self-defense, to protect the labor of this country against the encroachments of the half-paid labor of other countries; and on this broad ground we found the doctrine of protection, hence the moral advantages of protected labor. This will come from the argument already used. It will make protected labor prosperous, and where it prevails the general trend of society is to cause moral improvement.

Why should we protect wool-growing as a special industry? First, because the prosperity of this large industry will contribute to the general prosperity of the country, and to the prosperity of the whole land; hence we take it out of the narrow, sectional ground, and advocate it on the broad ground; hence it becomes a National question. The depression of an industry so important, so far-reaching in its influences as sheep husbandry, will affect the entire industries of the whole country. You can't make men prosperous, and pay them remunerative wages, without affecting the entire community; and then, the prosperity of one industry leads to the prosperity of another industry, and that again, in turn, until the whole circle is touched by its invigorating power, and it brings prosperity and happiness to the families of our community.

In 1860, we imported nearly one third of the woolen goods used in this country; now we only import one tenth. What does that mean? It means, outside of wool-growing, the establishment of large manufacturing institutions, and the employment of vast numbers of people, all engaged in the active duties and pursuits of life; all possessed of happy homes, and adding their forces to the general activity of the whole country. I have only time, as I know you are weary, to hint at these general points and leave you to amplify them in your own minds. But it is objected that custom duties increase the cost to the consumer. Is it so? Suppose we admit it, have we lost the argument? Does it antagonize the force of the position we assume? Has not every man learned from his experience that it is easier to pay the increased cost of an article in times of prosperity—very much easier—than a less price in times of adversity? In times of general prosperity, we find it very easy to pay these prices. Suppose it does add somewhat to the cost to the consumer; this life is full of compromises. We must, sometimes, give up something for the general good; and if it did increase the cost, the added activities to the vast numbers of people engaged in raising wool and manufacturing it into various forms of human clothing, will tend to compensate for the increased price. But it does not.

Now we approach the very ground where our doctrine seems to be like the Kilkenny cats—eating itself up. When we affirm that protection does not increase the cost, does it not seem to destroy the whole argument for protection? Does it not seem to leave us in a dilemma out of which we cannot extricate ourselves? Thus I heard the argument used down there in the hall this afternoon. I want to establish the fact that protection does not increase the cost. In 1860, delaine sold for twenty cents; now it sells for eleven cents. In 1860, blankets of one grade sold for two dollars; now the same grade sells for one dollar and twenty-five cents. Taking the highest grade that sold in 1860 for five dollars; now it sells for three dollars and seventy-five cents—the very same blanket; so that protection

does not increase the cost to the consumer in the long run. It might do so in the start, but after we evoke the power of competition, home competition regulates the price and brings other blessings we might refer to.

Now, we want to speak again, in close connection with this, of the importance of a home market to the purchaser and consumer. First, because it discounts the cost of long hauls. Don't you see, when we have home markets, we get clear of the transportation—the fare on these long lines of transportation? All that is saved to the consumer. Besides, we relieve ourselves of the possibility of adverse combinations and corners in foreign markets. Suppose, at the breaking out of the war, we had had no home manufactures, what would we have had to pay for the cloth to clothe our army, or the instruments of warfare which we could furnish to our soldiers? So, the moment we put ourselves in the power of foreign powers, we are required to pay any price they may demand. In addition to that, home markets keep the money at home. That is the source of our prosperity. The moment we pay out more money than we take in, that very moment we are on the highway to bankruptcy. You take a family; they are earning five dollars a day, but they are spending six dollars a day; don't you see it is no long way until bankruptcy overtakes that family? Now, by creating home markets, and by having home manufactures established, we keep the money necessary for the purchase and sale of these articles at home in active circulation, and the circulation of that money creates other industries, and thus it is that the whole community is interested in such activity. Will it not be a great deal better, and indicate a greater degree of prosperity in this country, when every man in the country—when every worker at daily labor—is employed even at more wages than when only one third or one half the people are employed even at advanced prices? It is this universal activity and aggregation of industry that makes a country prosperous and prepares the way for human progress and advancement; hence the necessity and importance of home markets, and these home markets are all dependent upon the doctrine of American protection.

I want to say again that these foreign markets are very uncertain. Now, American farm products find a home market in this country of ninety-two per cent., while we only have a market abroad for eight per cent; and you will remember, in connection with this, the efforts England is making, and all foreign countries, for producing their supplies within themselves. England is developing India now; building line after line of railroad; expending millions of dollars in order that her demand for wheat may be supplied by her colonial dependencies. When England can supply her wants from India, will the American farmer find a market there? Then he will be left to the mercy and greed of other countries. Hence, while we have every element for home independence, let us see to it that we develop home markets for our home products. Why cannot we create wool as cheap in this country as in other countries? If you will reduce the wages paid to labor to the schedule paid in foreign countries, then we don't want any tariff; we need no protection, because American ingenuity and American activity and perseverance will take the markets of the world on the same scale of wages paid for labor; hence labor must see that this whole system of American protection is not for capital—not for certain industries—but for the dignity and honor, the prosperity and pro-

tection, of American labor; and all legislation has been in the direct and positive interest of American labor. And the very fact that we pay higher wages, higher rates for the transportation of our wool to market, higher prices for grain to feed our flocks, and higher wages for the hands to take care of them—for these very reasons we cannot raise wool in this country as cheap as they do in foreign countries; and the prosperity, and dignity, and virtue of all labor depend on the fact of its being lifted above the depressing and destroying influences of the low wages of foreign countries.

But I will not detain you. It does seem strange to me—surpassing strange—that there is a disposition in our country to go past our own fields full of promise and possibilities for the present and the future—past our own work-shops and industries, on which happy families are depending for a living, for education, for development, and for moral and intellectual growth—that we should go past these, full of promise for the present and the future, to the oppressed lands of other countries, and patronize the work-shops and fields of those countries which are made to contribute to the extravagance of those who are in authority, and rule by divine right, as they profess. Strange that we forget American republicanism, including her home labor and home toil, to patronize that of foreign countries, oppressed by laws that we have no voice in forming or shaping. Shall we subject ourselves to the force and power of these burdensome and oppressive laws that we may support the mere idea of free trade, with its promise of lower prices for the moment, but sure to result in higher prices for the future?

I trust, therefore, gentlemen of this institute, that, while you look after special interests, you will remember the broad question affecting the interests of the nation—affecting the progress and development of the race. It is one of those mighty forces by which the world is lifted to a higher plane and man raised to the grand and glorious destiny that God intended for him when he put him in possession of this world with all its mighty possibilities; with the materials of this crude earth awaiting his command to assume almost every form; with the subtle fuel buried in the earth to assist his efforts in molding and fashioning those materials into every form that human ingenuity or imagination can conceive. We are, therefore, not only laboring for great home interests, but we are laboring for interests that are identified with the progress and welfare of the race. I thank you, gentlemen, for your attention.

---

## AGRICULTURE AND LABOR.

By HON. GALUSHA A. GROW.

*An address at the Scranton meeting of the Board.*

MR. PRESIDENT AND MEMBERS OF THE STATE BOARD OF AGRICULTURE: The earliest pursuits of mankind for a livelihood were those of shepherd, herdsman, and hunter. Rachael received her first kiss from Jacob at the well, whither she had led her father's flocks. Abram, rich in cattle, had his tent at Bethel, and Lot, with his flocks and herds, pitched his tent in the plains of Jordan.

The shepherds and herdsmen sought the valleys of the rivers and the

lands around bays and lakes, for there was abundance of pasture and water. The hunters sought the wilderness along mountain ranges where game did most abound. But all, shepherds, herdsmen, and hunters, were nomads, wandering from place to place, and living in tents covered with the skins of beasts. In these pursuits, and the climatic influences surrounding them, was the beginning of national character and characteristics.

The herdsmen at length commenced the tillage of the ground, which required fixed abodes, gradually developing into towns and cities. The hunters, leading a pursuit of greater danger, and requiring no fixed abode, became adventurers, the more vicious of whom formed the robber bands that infested the mountain fastnesses of Asia and eastern Europe, and at later periods enlisted as mercenaries in the armies of warring nations.

During the ages when might made right, these armed hordes, at intervals, long or short, swept down from the mountain ranges, over the lowlands, carrying away flocks and herds and the fruits of peaceable toil. The husbandmen, thus compelled to guard their homes from robbery and their fields from pillage, combined for mutual protection under chosen leaders. At length such combinations became governments, and the chosen leaders kings.

For centuries, the race struggled on amid the cruel barbarisms of the brutal passions of tyrannical rulers, until the Child of the Manger, in His divine mission on the seashore and along the hill-sides of Judea, established His earthly kingdom in the command: "Love thy neighbor as thyself; and inasmuch as ye did it to one of the least of these, ye did it unto Me." Thenceforth all the children of men are equal in the brotherhood of the race, and nations are to learn the ways of peace until the last sword shall be beat into plow-shares and the spear into pruning-hooks.

When the world's unwritten history shall be correctly deciphered, the record of the rise and fall of empires will be, in each nation, the history of the rise, development, and decline of its agriculture. It is the distinctive pursuit of civilization; the one that changes the wild rover from the predatory habits of savage life, fixing him in stationary dwellings, which is the beginning of civilization, and with its growth and advancement, come the comforts and refinements of social life, the associations and attachments of country and home. Its neglect is the first step in the decline of empires, and with its decay crumbles national power.

In the obscurity of the cottage, far removed from the enervating influences of rank and of affluence, is nourished the virtues that counteract the decay of human institutions, the courage that defends the national independence, and the industry that supports all classes of the state. The associations of an independent freehold are eminently calculated to elevate and ennoble the possessor. With homes and firesides to defend, the arms and hearts of an independent yeomanry are a surer and more impregnable defense than battlement, wall, or tower.

Next to agriculture, the question of greatest national concern is the condition of labor. For of all the pernicious influences which lead to national decay, the most baleful is a policy that degrades or impoverishes labor. The strength of nations consists, not in fleets and armies, but in the manly spirit of an independent yeomanry, and in the intelligence, comfort, and happiness of its laboring classes. That country

is greatest and most glorious in which there are the greatest number of happy firesides; and to make the fireside happy, it must first be made comfortable.

The principle is correct and just, that labor, whether of brain or muscle, ought to receive out of the accumulation of wealth in proportion to what it contributes towards the accumulation. But in reducing this principle to practice, in order to do it justly, the fact must not be overlooked that, in all pursuits, labor is paid in current expenses during the continuance of the business, whether there is any final profit or not. Authentic statistics show that a very large per cent. of all kinds of business ends in bankruptcy; thus sinking whatever amount of capital may have been invested. In all such cases it is clear that labor receives its full proportion, or more, for it shares no part of the losses.

The railroad system of the United States represents a capital of almost eight thousand millions of dollars. With all proper allowance for water, it would represent, probably, not less than five thousand millions of actual capital invested. The net earnings of the entire system for the year 1885 were a little over five per cent. of that amount. Can it be said that this percentage, which includes no payment of any part of the principal invested, is an unreasonable proportion for the capital which takes all risks of losses? Labor is paid before counting any net earnings, whether there are any to count or not.

In order to ascertain the just proportion to which labor would be entitled in any business, it is necessary, first, to ascertain how much capital the business requires. And the first payment out of net profits would be to repay the capital invested. As wages are paid in current expenses, and capital takes all the risk of losses, unless it were to be repaid first out of the net profits until the amount invested is reimbursed, it would be the height of folly for any one having money, to put it into business. So even in successful business there would be no accumulated capital to divide until the money invested is repaid.

But if the relative proportion of profits to be paid to labor and to capital could be figured with mathematical correctness, it would not be a solution of the great problem of American labor.

The real solution of the labor problem in this country is to determine how high the wages, or compensation for labor, can go, without destroying labor itself. The determination of that point is its only solution; all else is merely the expediency of palliatives. Arbitration, well enough in itself, only settles the existing dispute, which may arise again in the same or a different shape as often as it is settled. The cause of the dispute is not thereby removed, but remains the same as before.

The higher the price labor can be paid and retain the market for its products, the better it is for everybody; and to that point, in all cases, the employer can go; but beyond that point it is an impossibility; for labor cannot be paid in the production of an article more than the article itself will sell for in the market. The market price for an article and the compensation to be paid to labor in its production, are not, except to a limited extent, fixed by our country alone. In respect to both, we are in competition with the markets of the world.

A wise adjustment of duties on the products of foreign labor can, to a certain extent, prevent the reduction of prices in this country to a point ruinous to labor. But the price of labor can reach a point so

high as to be beyond the power of tariff duties to overcome the competition with the poorly-paid labor of the world.

In the countries of Europe, there are to-day twenty millions of laborers and artizans, producing articles for human consumption; and their daily wages are greatly less than are paid for like labor in this country. It would cost any one of these laborers or artizans to remove from his home in the Old World to one in the New, not to exceed forty or fifty dollars. For each one that should come there would be room for one less American laborer.

The great attraction for emigration to this country has been that it is the land of liberty, home of the oppressed, and asylum of the exile. In addition, make it, by undue stimulation, the most attractive country for high wages and short hours of labor—how long would it be before the labor market would be over-stocked from those bee-hives of industry, beyond the power of legislation, or the capacity of consumption, to save American labor from the starvation prices of the Old World? To determine the point to which the price of labor in this country can go and not produce such a result, is the real solution of the labor problem.

The man of immense wealth is no happier than the man with moderate means, provided each is equally content with his lot. Comfort and contentment are the two essentials for happiness in this world's pilgrimage; and whoever possesses these has no occasion to envy any other condition in life. Riches are not necessary to man's real enjoyment; but the means to prevent starvation are. Nor is a splendid palace essential to his real happiness, but a shelter against the storm and winter's blast is. These indispensable requisites can be secured only by labor.

Divine wisdom in the economy of creation made labor a necessity for human existence, and also made health and happiness dependent upon it. Labor, therefore, is not an evil to be shunned, but is the means for the attainment of most desirable aims and ends in life. In the sweat of thy face shalt thou eat bread, was not a malediction against the race, but was the statement of the condition on which man could be happy in his fallen state. All labor useful to man is equally honorable, and alike entitled to public consideration.

A disagreement between the employer and the employé as to the wages of labor is no more a war between capital and labor than a disagreement between the merchant and his customer, as to the price of articles offered for sale, is a war between the producer and the consumer. There can be no war, or even conflict, between capital and labor when their real interests are rightly understood. They are mutually dependent on each other, and neither can accomplish any great result without the other. Of what use is labor, beyond the supplying of mere physical wants by the cultivation of the soil, without capital, to furnish transportation to market for its products, as well as for the development of all industries; and of what use would capital be without labor?

In the old system of mining in Mexico, a peon dug the ore deep down in the earth, and filled a sack of raw hide with the material, and, throwing the sack over his shoulder, with a leather strap passing across his forehead to hold it while he used his hands in climbing a single upright pole, with notches like stairs, cut in it for his feet, and on reaching the top, would empty the sack of ore into a larger one suspended on either side of a donkey, which transported it along a zig-zag

path down the mountain side to a smelting furnace, erected by the nearest stream of water. Capital drives a tunnel through the mountain; lays an iron or steel track, and puts on it a locomotive and cars, into which the peon loads the ore as he digs it; and in as many minutes as it took hours before, transports the ore to the furnace; and the peon is transformed from a drudge, doing the work of a beast of burden, into a man with wages sufficient to make a home comfortable. Instead of the hovel of the peon, side by side with the stable of the donkey, there spring up comfortable dwellings, homes of happy childhood.

So in all the pursuits of life—in order to accomplish the best results for the individual happiness of all, capital and labor must go hand in hand, mutually dependent on each other.

All manual laborers cannot be equally successful, any more than all professional or business men can. There is no possible way by which incapacity or improvidence can be made equally successful with capacity, prudence, and economy in the struggles of life. If this in-born inequality be an evil, it must be charged as a fault in the wisdom of creation. But whoever is contented with sufficient means for making himself and those dependent upon him comfortable, has attained all there is of real happiness in the accumulation of wealth, and has, therefore, no reason to complain of his lot. All cannot be poets, painters, or sculptors any more than all can be lawyers, doctors, merchants, or tradesmen of any kind; yet every pursuit and business calling is within the reach of all. The highways to honorable distinction lead from the lowly cot the same as from the gilded palace, and all are open alike to the humblest child of the sons of toil, from whom have sprung most of the historic characters of our country, and in which this generation is not deficient.

The great soldier who sleeps on the banks of the Hudson, and who will, through all time, hold a foremost rank with the great captains who have led mighty armies over victorious battle-fields, was a farmer boy, and began life as a day laborer in a tan-yard. The martyr-President, who, of all the civil rulers of the world, will hold in the hearts of the great and the good a place second only to Washington, began life as a day laborer, and, to his mature manhood, earned his daily bread by his daily toil. So in all the great enterprises of this generation, as well as those which have, preceded it, the men of the greatest success, in the world's estimation, have in most cases, commenced active life with the smallest of pecuniary beginnings.

The grievances of labor in free elective governments are to be removed in the same way as any other grievance is removed—by an appeal to the intelligent judgment of public opinion. In free constitutional government, with free speech, free press, and universal ballot, there can be no excuse for a resort to violence for the correction of any grievance. In such a government, obedience to the commands of law and the mandates of courts is paramount to all else. No matter what the grievance complained of may be, a resort to lawless violence is an attack upon the rights of every law-abiding citizen—upon organized society itself—and if successful, is the first step in the road that leads to anarchy and national ruin. An enlightened public opinion in a free government will, in the end, correct all real grievances, if peaceable means only are employed. It may require time and patience; but that is the case with all attempts to remove long-standing abuses.

No cause, great or small, was ever yet benefited by the violation of

fundamental principles of right. God rules the universe by immutable laws of justice, and it is in vain for man to attempt to nullify them. One man's rights end where another's begin, is the fundamental principle of all just laws, and is the basis of civilized society. Liberty is the right of every person to engage in any lawful pursuit for a livelihood, and continue therein, without hinderance or molestation by any other person; and it is despotism in its worst form that deprives him of this right—a crime against humanity, scarcely less than the taking of life itself.

Shylock says to the judge whose sentence of confiscation spared only his house and his life:

“You take my house,  
When you take away the prop that supports it;  
You take my life,  
When you take the means which sustains it.”

The inalienable right of life and liberty is of no account without the inalienable right of the pursuit of happiness. The pursuit of happiness includes the right to pursue any lawful calling without hinderance or molestation.

The laborer is in all cases entitled to a fair compensation for the time he uses his brain or muscle, or both, for the benefit of another. The time thus consumed and paid for belongs to the employer, and he has the right to direct the mode and manner of its use. The time not paid for belongs to the employé, to do with it, within legal limits, as he pleases; and the employer has no more right to say how it shall be spent than has the employé to say to the employer whom he shall hire or how he shall conduct his business. The right of the employer to control the time or the acts of the employé ends where payment ends. These are the relative rights of employer and employé, and they cannot be violated by either without injury to both. Either has the right to organize for the purpose of improving his condition or prospects in life. But no voluntary organization has any greater power or rights than the individuals composing it; and any attempt to exercise any greater power or right than those possessed by the individual, becomes an organized attack upon society itself, which, in self-defense, if for no other reason, it must repel.

The discontents and complaints of individuals as to their lot in life spring, in most cases, from a mistaken notion as to life's most desirable aims and ends. No matter what the condition may be, there is more or less uneasy longing for something different; and even when that something is reached or obtained, the longing is not satisfied, and there is something still in the distance. Like the child who hastens towards the place where the rainbow touches the earth—no matter how near it approaches the apparent spot—the distance remains the same.

---

## THE COST OF FENCING.

By THE SECRETARY.

For the purpose of obtaining definite data as to the cost of fencing and farm fences in different portions of the State, printed blanks were

sent to the official correspondents of the Board, asking for reports upon the following points:

*Post and Rail Fence.*—Cost of chesnut rails in the rough, per hundred; cost of pointing rails, per hundred; cost of chesnut posts in the rough, per hundred; cost of locust posts, in the rough, per hundred; cost of hewing and mortising posts, per hundred; cost of four-rail fence, per panel, and cost of five-rail fence, per panel:

*Worm Fence.*—Cost of rails, per hundred, and cost of fence per panel, of five rails and rider.

*Board Fence.*—Cost of sixteen-foot hemlock fence boards, per thousand; cost of sixteen-foot pine fence boards, per thousand; cost of chesnut posts for board fence, per hundred; cost of locust posts for board fence, per hundred; cost of four-rail board fence per rod, and cost of five-rail board fence per rod.

*Wire Fence.*—Costs of posts for wire fence, per hundred; cost of putting up five-wire fence per pannel, and total cost per rod of five-wire fence put up.

Some of the counties failed to make any report, and some only made a partial report, embracing some of the items of information asked for. In many cases, the questions were not adapted to the kind of fence used in the neighborhood; in others, stone walls were mainly used. From the reports made we condense the accompanying table, from which we deduce the following general items of information:

That the cost of broad chesnut rails varies from eighteen dollars per hundred in Philadelphia county to three dollars per hundred in Fulton, Greene, and Huntingdon; that the cost of pointing the rails is much less variable than the price, per hundred and varies from one dollar and seventy-five cents per hundred in Indiana and Juniata to seventy-five cents per hundred in Cambria, Clarion, Fayette, Franklin, and Greene.

That the cost of chesnut posts, in the rough, varies from twenty-two dollars per hundred in Philadelphia county to but four dollars and fifty cents in Sullivan, and four dollars and seventy-five cents in Potter.

That the cost of hewing and mortising posts varies from twelve dollars and seventy-five cents in Juniata to but four dollars in Bedford, the latter price, however, being manifestly too low to include the board and wages of a good hand at the work.

That locust posts, in the rough, vary in cost from forty dollars in Adams to fifteen dollars and fifty cents in Cambria.

That the estimated cost, ready to put up, and including materials and labor, of a four-rail post-and-rail fence, varies from one dollar and twenty cents in Philadelphia county, to but thirty-five cents per panel in Fayette.

That the cost of worm fence rails varies from twelve dollars per hundred in Philadelphia to but two dollars in Fulton, (which we think below the actual value or cost.)

That the total cost of a five-rail (with rider) worm fence ready put up and including materials, is found to vary from seventy-five cents in Philadelphia, to twenty-six cents in Greene.

That the cost of sixteen-foot hemlock fence boards varies from thirty dollars in Adams to but seven dollars in Clearfield.

That the cost of sixteen-foot pine fence boards varies from thirty-five dollars per thousand in Adams to but ten dollars in Clarion, a varia-

tion of seven dollars per thousand being shown between the pine and hemlock in Lycoming county.

The chestnut posts suitable for a board fence cost seventeen dollars per hundred in Indiana, and but five dollars in Clearfield, Columbia, and Forest, and but four dollars in Crawford.

That locust posts, suitable for the same purpose, cost at the rate of thirty-five dollars in Adams, and but twelve dollars in Clearfield, Dauphin, and Lancaster much of this difference is, however, due to the difference of opinion which exists as to the size of posts for this purpose. Some of the answers which specified a driven post were excluded from the estimate.

That the cost of a four-rail board fence, including materials and ready to put up, varies from one dollar and forty-five cents in Allegheny to forty-five cents in Westmoreland.

That the cost of a similar fence with five rails varies from one dollar and sixty cents in Allegheny to but fifty-five cents in Potter and Westmoreland.

That posts for a wire fence vary in cost from fourteen dollars in Philadelphia to four dollars in Clearfield and Crawford.

That the estimated cost of putting up a five-wire fence, materials not counted, varies from eight cents per rod in Bradford and Dauphin to thirty cents in Cambria.

From the reports furnished by our reporters, we take the following average of each item of information asked for:

Chestnut rails, (rough,) . . . . .	\$7 00	Hemlock boards, (16 feet,) . . . . .	\$12 79
Pointing rails, . . . . .	1 05	Pine boards, (16 feet,) . . . . .	18 25
Chestnut posts (rough,) . . . . .	11 34	Chestnut posts, board fence, . . . . .	9 45
Locust posts, (rough,) . . . . .	23 87	Locust posts, board fence, . . . . .	18 00
Hewing and mortising posts, . . . . .	8 88	Four-rail board fence, . . . . .	79
Cost of four-rail fence, . . . . .	63	Five-rail board fence, . . . . .	90
Cost of five-rail fence, . . . . .	69	Posts for wire fence, . . . . .	9 52
Rails for worm fence . . . . .	4 72	Putting up wire fence, per rod, . . . . .	14
Worm fence, per panel, . . . . .	42	Cost of wire fence per rod, . . . . .	60

In a paper recently read at one of the meetings of the Board by Eastburn Reeder, member from Bucks county, he estimates the cost of making an ordinary four-rail post fence, (chesnut,) as follows: Post, twelve cents; rails, ten cents each, or forty cents; total cost of material, fifty-two cents; labor of setting, twenty-four cents; total cost per panel of ten feet, seventy-six cents, as against our average over the whole State of sixty-three cents. In this estimate he gives the cost of hewing and mortising posts at eight cents, and pointing at two cents each, or respectively eight dollars and two dollars per hundred, as against our average of seven dollars and one dollar and five cents per hundred.

Mr. Reeder gives the following itemized estimate of the cost of a four-rail board fence per rod:

Forty feet of hemlock boards, at \$20 per hundred, . . . . .	80 cents.
Two chesnut posts, at \$12 per hundred, . . . . .	24 "
Nails, . . . . .	1 "
Labor, . . . . .	5 "

Total cost per rod, . . . . . \$1 10

In making a comparison between the figures offered by Mr. Reeder and those which represent the average of the State, it should be remembered that his are from a county in which fencing timber and wages are much above the average of the State, and that his figures will be correspondingly above the State average of cost of fencing.



## DIURNAL RAPACIOUS BIRDS.

[With special reference to Chester county, Pa.]

By B. HARRY WARREN, *Ornithologist of the Board, West Chester, Pa.*

In the county of Chester are recorded, in the several published catalogues of birds, some fifteen species of the diurnal raptorial birds. This number, of course, includes birds native, migratory, and accidental, the term *accidental* being given to species that have wandered from their common geographical range.

In presenting this paper, it is my purpose to particularize chiefly such hawks as are most generally known to agriculturists.

**The Red-tailed Hawk—"Hen-Hawk."**—(*Buteo borealis*, Vieill.)

*Hab.*—"The whole of North America, Mexico, Cuba, Jamaica."—*Coues.*

This hawk—the most abundant of our raptorial birds—is the detested "hen hawk" of the farmer. Certain ornithologists not being aware of the dissimilarity of markings between the adult and young, likewise the climatic change to which they were subjected, named as distinct species this bird in certain conditions, which, however, have been proven by more recent investigators to be simply variations in the plumage.

The Red-tail Hawk is exceedingly shy and wary, and is taken with difficulty, unless approached on horseback or in a sleigh or wagon. In the far West, however, this is quite the contrary, and H. W. Henshaw, of Washington, D. C., one of our most reliable ornithological authorities, in his "Ornithological Notes," says:

"At Mount Graham, in October, these hawks were present in large numbers, and tamer than I have ever known hawks to be elsewhere. Walking quietly along, there was no difficulty in approaching within a few yards of the tree where one chanced to perch. One individual, which I scared from its perch by throwing a stone, took a few broad circles about me, as though wondering what it meant, and quietly returned to his former stand."

Red-tail hawks in their fall migrations are gregarious. One clear, cold autumn afternoon in 1876, I saw, near West Chester, a flock of these hawks. The sky was destitute of clouds, except a cumulus stratum directly beneath, and apparently about half way between the hawks and the earth. In the center of this vapor was an opening of sufficient size to enable me to watch the gyrations of the birds; two of them suddenly separated from the main body, approached each other screaming, and apparently in great rage. They descended screaming, and, to all appearances, clinched to within about one hundred yards of the earth, when they parted. Evidently neither bird had received much injury, as they both, after taking short flights across the meadow, ascended in company with two or three of their companions that had accompanied them part way down, to the main body. Another individual closed his wings until the body presented a triangular outline, descended with almost lightning-like rapidity to the top of a sycamore, where it alighted, and remained for some seconds pluming itself. This party of hawks, after performing for nearly twenty minutes.

these, and numerous other aerial antics, continued their southern flight. Combats in mid-air are quite common among red-tailed hawks. I have repeatedly witnessed such battles, and am fully convinced that in the great majority of cases food is the incentive to such action. Illustrative of the superior vision of this hawk—and the same applies to other of the *Rapacia*—the following is given, as observed by the writer: A clear morning early in March, I saw a red-tail circling over the meadows; every circle took him higher and higher in the air, until at an altitude where he appeared no larger than a blackbird, he stopped, and with nearly closed wings, descended like an arrow to a tree near by me; from this perch, almost the same instant he had alighted, he flew to the ground and snatched from its grassy covert a mouse. The momentum with which this bird passed through the atmosphere produced a sound not very unlike that of the rush of distant water. This species when wounded, like other rapacious birds, will defend itself with its claws and bill against all advances. A stick or gun-barrel presented to it, when crippled, will be grasped, and the bird can be carried pendant from the same a considerable distance before it will lose its hold. With such tenacity do they hold on that a friend of mine who had winged one, in his endeavors to capture it alive, had the bird to fasten on his forearm with both claws; to relieve himself he was obliged to take out his penknife and sever the tendons of both legs.

*Nidification.*—Nest-building generally occurs in March, and lasts from eight to fifteen days. The nest is built in the woods, commonly on a large oak or hickory tree. A pair of these hawks resorted for five consecutive years to a large oak tree, (*Quercus tinctoria*,) for nesting purposes, in a belt of timber adjacent to the far-famed Deborah's Rock, East Bradford township. The nest is a rather bulky structure; is made, externally, of sticks and twigs, some of the former being an inch in thickness; internally, it is lined with leaves and the inner layer of bark—usually from the oak and chestnut trees. This lining of bark is frequently torn in shreds.

Certain ornithologists, Audubon among the number, have found five eggs in their nests. I have, however, mostly found two, and on no occasion have I found more than three to constitute the full complement. The eggs vary much in their markings. Their ground color is a dull white or rusty white, marked with minute brown spots, or with large purplish dark brown blotches, often covering the greater part of the egg. Gentry tells us: "The eggs vary in size, even in the same nest. The largest measures 2.52 by 1.88 inches, and the smallest 2.10 by 1.72 inches." Incubation lasts about three weeks. Certain writers claim that this species will boldly defend invasion of its home on the part of man. Such may have been the experience of others, but such statement is the reverse of my experience. I have taken both eggs and young, and, as yet, I have encountered no opposition; but have found them cowardly, flying away, in fact, beyond gunshot at my approach, uttering cries of distress, and seemingly to engage in mutual condolence over their misfortune.

**The Red-Shouldered Hawk or Buzzard—Winter Falcon.**—(*Buteo lineatus*, (Gm.) Jard.)

*Hab.*—"United States and British Provinces (Nova Scotia, Bland.)  
*Var. elegans*, western (? Canada, McIlwrath.)"—*Coues.*  
This beautiful bird, like the preceding species, puzzled certain of

the older ornithologists, Wilson among others, who applied to it, because of its varied markings, &c., distinct names, which, however, more modern researches have conclusively proven to be simply varieties, and not distinct species. In this section, the Red-shouldered Hawk is to be regarded only as a winter resident. With regard to the breeding of the hawk, however, in this locality, the following is an extract from a letter to myself from Dr. William E. Hughes, Medical Department, University of Pennsylvania, Philadelphia, Pa.:

"The Red-shouldered Hawk eggs—two in number—were taken in East Pikeland township, Chester county, Pa., but in what year I am wholly unable to say. The female was shot and identified."

During its residence with us it frequents principally the large water-courses, meadow-lands, and the vicinity of ponds, and not unfrequently an individual of this species can be observed on its perch overlooking a springhead. When the streams and meadows are frozen, I have noticed that they especially resort to such localities as last named. When disturbed from its perch, it utters, in a plaintive and impatient voice, the note, *keeo, keeo*. Its flight, which is generally short, is graceful and very owl-like. This hawk, like its relative, the Red-tail, may be observed sitting by the hour on some favorite tree or stake adjacent to swampy or boggy ground, watching for small quadrupeds and batracians, which constitute its principal fare.

From "Birds of Connecticut," by Doctor William Wood, the following mention of the nest, eggs, and habits is taken:

"Nidification commences soon after their arrival from the South. Oviposition usually occurs from the middle of April to the first of May. In one instance I took eggs on the first day of April that had been incubated at least a week, and then, again, I have taken them as late as the middle of May. More eggs can be obtained of this bird, in this vicinity, than of any other of our *Rapacia*, and I think it may safely be said, all others. The nest is usually placed in the fork of a high tree, (the bird instinctively seeking safety rather than any particular kind of a tree,) and consists of sticks and twigs, resembling the crow's nest, though generally somewhat larger and more compactly built. Period of incubation about three weeks. The eggs usually number from two to four, more commonly three; in one instance I found six. Of some thirty sets before me, there is a great diversity of markings. In shape, form, and ground-work they are all alike, but in markings quite different. They are about the size, or a little larger, than the eggs of the domestic fowl; of a broad, oval form, granulated; of a dusky-white color, very slightly inclined to blue in the fresh egg, with one or more very large reddish-brown blotches on the larger end, interspersed with smaller ones, diminishing in size and number as they approach the smaller end. This is the most common appearance of the egg. I have taken from the same nest eggs handsomely blotched, and white, or dirty-white, without any marks. I have selected four sets of measurement:

No. 1, long diameter, . . .	2.30;	short diameter, . . .	1.85
" 2, " " . . .	2.15;	" " . . .	1.80
" 3, " " . . .	2.30;	" " . . .	1.80
" 4, " " . . .	2.30;	" " . . .	1.80

"During the courting season it is very noisy, sailing around in circles with its mate, and filling the air with its shrill notes. Their mutual attachment continues through life. They hunt in pairs. The male not only assists in incubation, but supplies his mate with food.

If approached by the sportsman while sitting, if the nest is low and exposed, the female will fly off very quietly and stealthily long before the male arrives within shot, and alight at some distance. If the nest is high up, she will draw down her head, thinking herself perfectly concealed and secure, while her tail invariably projects over the nest, giving unmistakable evidence of its occupancy. They become attached to a particular piece of woods, and will build near the same spot for years, if not killed, and will even continue to build there for some time if their eggs are annually taken, occasionally rebuilding an old nest, but according to my observations, they usually prefer a new one."

During its stay in this section, I have found this hawk quite tame and easy of approach, and my observation has been that they hunt singly, and not in pairs. As a winter visitant to Chester county, this species, although not nearly so abundant as the Red-tail, may be regarded as of frequent occurrence. I have in one season obtained twenty-odd of these birds, young and old.

**The Broad-Winged Hawk—**(*Buteo Pennsylvanicus*, Bonaparte.)

*Hab.*—"Temperate Eastern North America. South to Costa Rica, Panama, and Ecuador. Cuba."—*Coues*.

Of the genus *Buteo*, in this section, the Broad-wing is the least abundant. It is a native and resident. The movements in the air of this hawk are easy and beautifully graceful. When in quest of food, its flight is in circles. At times, when circling, like the Sparrow Hawk, it will stand for an instant beating the air, and then descend with great velocity upon its prey, which it secures, not in its descent, but as it is on the rise. I have on more than one occasion witnessed this species take aliment in the way described. I incorporate it, notwithstanding it disagrees with certain good authority.

Nest-building takes place from the first to the middle of May, and the four nests which I have found near West Chester have all been located in high trees: three in hickory trees; the other in an oak. All of these nests were over fifty or sixty feet from the ground. The nest is very similar to that of the Cooper's hawk; it is made of sticks, twigs, leaves, and rootlets, lined with feathers; one I found lined with bark. The complement of eggs is usually four, although three sometimes is the full set. The eggs are somewhat larger than those of the Cooper's hawk, with a dull white, grayish ground color, with brownish red spots, which vary in size from specks to large patches, frequently confluent.

This hawk is easily captured, appearing quite tame and unsuspecting. I have always found it to be cowardly, and to evince no disposition to repel an invasion of its nest.

Audubon relates the following circumstance, which came under the notice of himself and brother-in-law while out on a tour: "As we crossed a narrow skirt of woods my young companion spied a nest on a tree of moderate height, and, as my eye reached it, we both perceived that the parent bird was sitting in it. Some little consultation took place, as neither of us could determine whether it was a crow's or a hawk's nest, and it was resolved that my young friend should climb the tree, and bring down one of the eggs. On reaching the nest, he said the bird, which still remained quiet, was a hawk, and unable to fly. I desired him to cover it with his handkerchief, try to secure it, and bring it down, together with the eggs. All this was accom-

plished without the least difficulty. I looked at it with indescribable pleasure, as I saw it was new to me, and then felt vexed that it was not of a more spirited nature, as it had neither defended its eggs nor itself. It lay quietly in the handkerchief, and I carried it home to my father-in-law's, showed it to the family, and went to my room, where I instantly began drawing it. I put the bird on a stick made fast to my table. It merely moved its feet to grasp the stick, and stood erect, but raised its feathers, and drew in its head on its shoulders. I passed my hand over it, to smooth the feathers by gentle pressure. It moved not. The plumage remained as I wished it. Its eye, directed towards mine, appeared truly sorrowful. I measured the length of its bill with my compass, began my outlines, continued measuring part after part, as I went on, and finished the drawing without the bird even moving once. The drawing being finished, I raised the window, laid hold of the poor bird, and launched it into the air, when it sailed off until out of sight, without uttering a single cry, or deviating from its course."

It would seem, however, that the disposition of this bird, under certain circumstances, is very variable. Mr. A. G. Boardman, of Maine, who has found several nests, and secured the eggs, finds it to be courageous and spirited. A man whom he had employed to obtain a nest was attacked with great fury while ascending the tree, his cap was torn from his head, and he would have been seriously injured if the bird had not been shot. Another instance is mentioned by Dr. Wood, where this hawk attacked a boy climbing to her nest, fastened her talons in his arm, and could not be removed until beaten off and killed with a club.

**The Sparrow Hawk—**(*Falco sparverius*, Linn.)

*Hab.*—"The whole of North America and southward."—*Coues*.

This well-known little hawk is the smallest and most beautiful of the family *Falconidae*. It is a resident, but is more numerous during fall and winter than at other seasons. Unlike all other of our native hawks, it sometimes rears two broods in a season. The female, as is the case with all our *Raptores*, is larger than the male.

The Sparrow Hawk builds no nest, but deposits her eggs—numbering from five to seven, rarely the latter number—in hollow trees, selecting usually the deserted hole of a woodpecker. Oviposition occurs early in April. Occasionally, if the eggs are taken, the bird will a second time deposit eggs in the same nest. When the young or eggs are disturbed, the parent birds will sometimes defend invasion of their domicile with great temerity. Some few years ago, I was endeavoring to secure the young from a nest of this species. I had climbed the tree to the aperture, about thirty-five feet from the ground, wherein were snugly packed five young, one of which I removed, when both old birds assailed me with their utmost prowess. They several times struck my head and arms with their talons and wings. So persistent were their attacks that I, desiring to obtain the young alive, directed a companion, who stood near by, to shoot both birds. I have repeatedly taken the eggs and young of this species, but never, only in the above-cited instance, encountered such determined opposition. When reared from the nest, this species will soon become attached to its master. I raised two, which were given their freedom. Both birds would come at my call and alight on my outstretched arm or shoulders, anxiously waiting for a grasshopper or piece of meat, which was always their

recompense. This hawk will resort, for several consecutive years, to the same tree for breeding purposes. From Dr. Wood's "Birds of Connecticut," the following remarks, with regard to the nesting of this bird, are taken:

"One of my collectors found a nest of four eggs in the top of a stump, about ten feet from the ground. This nest was composed of grass, and was discovered by the grass protruding through a crack in the stump. Whether this hawk constructed this nest, or whether it had been made by some other bird, it is impossible to tell; but if this hawk constructs no nest, as asserted by Dr. Brewer and others, it must have obtained it piratically, as the nest was new. In another instance, which occurred in Granby, Connecticut, the nest was known to have been obtained in this way. A farmer made a dove-house inside of his barn, with holes through the side of the building communicating with it. A pair of doves that had mated there were attacked and killed by a pair of Sparrow Hawks, who took possession of their nest, laid four eggs, and commenced incubating. During this time they found the farmer's chickens very convenient for food—too much so for their own good. Both of the birds I saw after they were killed, and their four eggs—two of which are now in my cabinet. The eggs contained young birds, hence this was a full set. Samuels collected one set of four in Maine, and says in his Ornithology: 'I am inclined to think, from what I can learn from collectors and others, that four is the usual number laid by this bird.'"

Incubation, which lasts for about a period of from twenty-one to twenty-four days, is engaged in by both birds, and while one is sitting its mate supplies it with food. When first hatched, the young are covered with a white down. The food of young, while under parental care, I have found to consist chiefly of insects, mostly *orthoptera* and *coleoptera*.

**Cooper's Hawk—Chicken Hawk.**—(*Accipiter cooperi*, Bonaparte.)

*Hab.*—"Temperate North America, and southward." *Var.*—*Gundlachi*, Cuba.

*Lieutenant Warren's Expedition.*—5,163, Fort Berthold; 5,164, White Earth river, Dakota; 5,165, mouth of the Yellowstone.

*Later Expeditions.*—60,623, Uintah mountains.

As may be gathered from the above, the habitat assigned to Cooper's Hawk includes that of the so-called *Accipiter mexicanus*. This last is a pure figment, described by Mr. Swainson, who was apparently ignorant of *A. cooperi*, and perpetuated mainly by Mr. Cassin, whose authority has had weight in this instance with all American writers, until quite recently. The most that can be claimed for the supposed *mexicanus* is that it consists of rather smaller and more heavily colored, because more southern, specimens of *A. cooperi*; but, even in extreme cases, the difference is insufficient to warrant retention of the name. Doctor Hayden's specimens, originally referred to "*mexicanus*" by Mr. Cassin, are no smaller than ordinary *cooperi*, and not otherwise perceptibly different. As in too many other cases, the identification, in all probability, was made upon some supposed points of geographical distribution that were groundless. So far as I know, the identity of *mexicanus* with *cooperi* was first published by Mr. Allen, although others, myself among the number, had previously become convinced of the fact. There is little to add to Mr. Allen's satisfactory exposition of the case. This pretended species disposed

of, we have in this country two species of *Accipiter*, identical in coloration, and nearly so in form, but instantly distinguished by the great disparity in size, the difference being relatively as great as that subsisting between *Picus villosus* and *P. pubescens*, and the two cases being precisely parallel. The largest females of *A. fuscus* grade up closely toward the small males of *cooperi*, but there appears to be a constant small gap between them, which, taking sex for sex, is much greater. The female *fuscus* is twelve to fourteen long, the extent about twenty-six, the wing seven to eight, the tail six to seven. The male *cooperi* is sixteen to eighteen long, about thirty in extent, the wing nine to ten, the tail about eight. There is also a difference in the feet, those of the *fuscus* being much slenderer, comparatively as well as absolutely, and relatively longer; the whole foot is not over three and one fourth long, while that of *cooperi* is at least four, generally more. In adult male *fuscus* the tarsal scutella frequently fuse, leaving a perfectly smooth shank—a state not observed in *cooperi*.—*This, and the habitat when elsewhere given, is taken from Coues' Birds of the North-west.*

This much-detested and commonly-called "long-tailed chicken or Pheasant hawk," is a native, and as such is probably more numerous than any of our diurnal *Rapacia*; it is resident, but is not near so plentiful during the winter months as throughout the summer and early autumn. For impudent daring this species, without doubt, ranks preëminent among the raptorial genera. Almost every farmer or poultry-raiser can reiterate instances of where he or she was the victim of pillage by this bold and audacious marauder. In the spring of 1878, a friend presented me with a Cooper's hawk, which he had caught in a steel trap, but not until he and his mate had destroyed some fifty young chickens; during one day they killed twelve. Like the Sparrow hawk this bird had been tamed to come at call. Dr. Coues, in his especially valuable publication, "Birds of the North-west," relates the following peculiar and interesting account of the docility of this species: "I witnessed an interesting instance of this while in the south-west, riding twenty miles one day to see some tamed hawks that had grown quite famous locally. Our errand told, we were made at home directly, for 'Tennessee Bill,' as our host was known in these parts, was proud of his pets, and doubtless gratified we had come so far to see them; besides, he was not sorry to hear the news from the 'fort,' living all alone as he did. He tendered such hospitality as his log-cabin afforded—of the kind, however varied in substance, is always much the same 'in spirit.' Bill promised that the birds should be duly forthcoming, 'providin' they're anyways about here,' he added. He stepped to the door and blew a long, shrill whistle with his fingers in his mouth. No answer, and he whistled again, when, like a far echo, we heard a cry from the woods: 'Jes' so; I s'piscioned they were off down the crik, huntin' on their own hook; thar they come; think I've got some grub for 'em; sold, ain't they?'"

"In a moment three hawks came dashing towards the house with eager cries. Catching sight of strangers, they veered off at the last moment, and with a graceful upward curve, settled in a tall cottonwood overhead. There they stood, peering with outstretched necks down through the foliage, eager, curious, yet distrustful, and occasionally uttering a whining note. Bill explained that they were afraid of us, but said he 'reckoned he'd fetch 'em down,' and entered the

house for his rifle. I was surprised, for I thought he was going to kill one; but my companion called to my mind that Bill was still in the habit of shooting small birds for them to eat, as he had done when they were quite young. The birds redoubled their clamor as their owner re-appeared, gun in hand, and leaped lower down among the branches. He stepped forward a few paces, and then, appetite overcoming their mistrust, they sailed down, and flapped about over his head as he walked towards the bushes. Crack! ping! He knocked the head off an unlucky sparrow, picked it up, held it out in his hand, and made a queer, chuckling noise, like a hen clucking to her chickens. The boldest settled lightly on his shoulder, then slid down his arm, seized the bird, and flew off, with the other two in full pursuit. These three birds had been taken, when very young, from their nest in the crotch of a cottonwood over the cabin, reared in captivity until well-grown, and then allowed their liberty, with the above gratifying result. Both the parents had been shot."

Nidification commonly is begun about the 20th of April, and lasts for a period of from three to five days. Occasionally this bird will deposit its eggs in a deserted crow's nest. Gentry, in his "Life Histories of Birds of Eastern Pennsylvania," mentions an instance of where the new-formed nest of the crow was taken, after having driven its rightful occupants away. I believe, however, they prefer to erect their own nests, and, from my observations, am quite positive they only appropriate the nests of other birds when their own have been destroyed. Gentry observes, "in cases where other nests are occupied, it is mainly done by young birds, or those of indolent habits." The building of the nest is the conjoint labor of both birds. It is usually built in a thick woods. When in such a locality is mostly low down, yet, when, as is occasionally the case, an isolated tree is selected as the nesting site, it is frequently so placed as to render it inaccessible to all advances of the oölogist. Externally the nest is built of sticks, varying much in size. It is generally lined with the inner layer of bark, although, frequently, blades of grass, feathers, and leaves enter into the construction of the interior. While certain writers have described the nest as broad, with but a slight concavity, I would remark that such statement is not in accord with my observations, as I have invariably found the concavities to be well marked. Dr. Wood states: "That the nests in this locality (Connecticut) are neatly built, very symmetrical, large in proportion to the size of the bird, and of sufficient depth for safety to the eggs, and to conceal the occupants."

The eggs usually number from three to four, although it is not a rare occurrence to find five. Their color is a dull bluish white. Exceptional sets are sometimes taken with numerous and unevenly distributed brown or reddish spots. A gentleman of my acquaintance once took four eggs from a nest which were void of spots. The female, although driven off when the first complement was taken, made in the same nest a second deposit of four eggs, and, strange to say, the last were all spotted. The period of incubation is given by Gentry to be eighteen days. Although, in this particular, my observation has been somewhat limited, I am fully persuaded that the time required for this, likewise other of our *Rapacia*, is, certainly, three weeks, or over. The young leave the nest in about twenty-five days; when about eight or nine weeks old they are able to provide food for themselves; to this time, however, they are carefully guarded by the old birds, and fed al-

most entirely on a diet of small birds, young chickens, and some few insects.

Dr. William Wood, in his valuable publication, "The Birds of Connecticut," to which I have repeatedly referred, makes mention of a fact, which, it appears, has been generally overlooked by ornithologists, viz: with regard to the color of the irides in the adult or full-plumaged bird. He says: "The eye is described as yellow by all authors I have read upon the subject; nevertheless, it is reddish amber in the adult bird. It was fifteen years after I began my ornithological cabinet before I received a specimen with this colored eye, and I supposed until then that the eye was always yellow. I do not know at what age the eye takes on this reddish appearance, but I do know that it takes at least three years, and possibly more, for I have three distinct stages of plumage in my collection representing as many years, only one of which has the reddish amber eye. This is not a *lusus naturæ*, as I now have four adult birds with this colored eye as distinctly marked as in the gos-hawk." In reference to the foregoing quotation I fully concur with the views of the doctor. Within the past eight years I have had two specimens of the full-plumaged birds, both of which had the "reddish amber-colored eyes." Notwithstanding the fact of the abundance of this species, but few adults are obtained, and the collector who secures a full-plumaged bird, may regard himself as specially favored. Doubtless this same scarcity is common throughout all sections of its extensive range. It is probable that to such scarcity is due the omission by numerous writers and collectors.

**The Sharp-Shinned, or Brown or Slate-Colored Hawk; "Little or Short-Tailed Chicken Hawk"—(*Accipiter fuscus*, Gray.)**

*Hab.*—"The whole of North America, south to Panama."—*Coves.* This extremely daring and spirited little hawk is one of the most abundant of our North American species, and in this locality during the autumn, winter, and early spring is quite plentiful. It is enumerated among the indigenous *fauna* of Chester county; in this region, however, but few nests have been reported, and I am free to record it as one of the rarer of our native *Raptores*. I have taken two nests, both built in low cedar trees; these nests were entirely constructed of small twigs, and were loosely but firmly made. The cavity of one nest was quite superficial, but that of the other was well formed. The eggs—each nest contained five—are deposited about the first of May. Gentry, a close observer and facile writer, remarks in his "Life Histories of Birds," that the "eggs, in some instances, are laid on consecutive days, but we have positive proofs that sometimes a single day is intermitted, and at other times, even two and three days intervene between each deposit." In one of my nests I found two days to intervene after the deposition of each of three eggs, and the fifth ovum was deposited after an intervention of three days. Gentry has found them breeding in the deserted nest of the common grey squirrel. A gentleman residing in West Chester informs me he found a pair breeding in an old crow's nest; such sites, however, Gentry advises us are rarely chosen. It is said this species will sometimes nidificate on a ledge of rock or hollow and decaying tree-limbs. One nest, which I had the opportunity of observing from its early commencement, was built by the united labor of both birds, which occupied a period of seven days. Gentry, who, doubtless, has had a more extensive experience, gives three or four days, according to the style, as the time

requisite for the construction of the nest. Various writers assert that dry grass, leaves, moss, &c., aid in the make-up of the nests; such, no doubt, is the case, but, as previously stated, I have found sticks and twigs to solely constitute the nests. Incubation is alternately engaged in by both birds, which, while they show great solicitude for their offspring, repelling all bird intruders with the most determined zeal and pugnacity, will, when molested by man, show marked timidity, and leave to his desecration their nest and its contents. The young are carefully watched and fed by the parents, chiefly on a diet of small birds—sparrows principally—until, Gentry says, they are about six weeks old, when they are able to provide food for themselves.

In presenting the foregoing pages it has been my object to mention specially only such hawks as are positively known to have bred within the confines of Chester county. Such facts have been given, we trust, which will be of common interest to the general reader and ornithological student.

#### What Hawks Eat.

The majority of mankind, it would seem, associate with the name "hawk" only deeds of rapine and other pernicious traits. I have positive knowledge of individuals, who, whenever the opportunity is offered, destroy that exclusively insectivorous bird, the Night-hawk, (*Chordeiles popetue*), for certainly no better reason than that it has received the misnomer "hawk." When you question them as to the motive for such action, the usual response will be: "Well, you know they are hawks, and all hawks are bad." The hatred to the Night-hawks is not, I am well aware, entertained by the generality of intelligent farmers.

Towards the hawks proper, however, I am fully convinced the vast majority of agriculturists, sportsmen, and others entertain only the most bitter animosity. For the purpose of showing that hawks do subsist on a diet other than that of poultry and game, I give here the result of some two hundred and forty-five stomach examinations made by myself within the past eight years, and cherish the hope that from the same the average hawk-hater may glean information which will cause him to reflect before he kills every bird which is, it would seem, cursed by the cognomen "hawk."

It is but proper for me to remark that these post-mortem examinations, with the exception of the sparrow, Cooper's and broad-winged hawks, have mostly been made during the autumn, winter, and earlier spring months. This observation is made owing to the fact that it is argued by many that the *Rapacia* are most destructive to the raptorial birds during the hawk's breeding season.

#### The Red-tail Hawk.

Dr. Wood says, in speaking of this species: "In their bill of fare, snakes form quite an item in the spring and summer months, but in the winter months the wild game of our woods and the poultry-yard satisfy the cravings of hunger. When capturing snakes they sometimes 'wake up the wrong passenger.' A farmer living in this vicinity, while putting up a fence around his pasture, noticed a large hawk on the ground some forty rods from him, sometimes rising up two or three feet, then dropping down. Supposing him to be devouring some game, he paid but little attention to it at first, but from its continuing in the same place, and keeping up the same maneuvering

for a time, his curiosity was excited, and coming near the bird he discovered that the tail of a large black snake was coiled around the hawk's neck, and that the head and a part of its body was in a hole in the ground. The hawk was nearly exhausted. With a blow of his ax the farmer severed the snake, and brought the hawk to his barn, where he kept him alive for some time. The part of the snake attached to the bird measured three feet, which was, probably, about one half its length. The hawk evidently seized the snake when he was partly in his hole, and was unable to draw him out; and, when found, the serpent was endeavoring to convince the would-be captor that 'it is a poor rule that don't work both ways.' This was the adult red-tail hawk."

During the breeding season, they frequently hunt together for food for themselves and young, "and if, perchance, they spy a squirrel on a tree, one will drive it while the other poises itself ready to seize it if it dodges to the other side to evade the grasp of the first hawk. From the two there is no escape. Grasping it firmly by the neck, the assailant practically demonstrates the possibility of garroting its victim, when the ill-fated squirrel is carried to the eyry and torn to pieces to satiate the cravings of their rapacious young."—*Wood*. In speaking of the food, Gentry remarks substantially as follows: They feed principally on small quadrupeds, small birds, and reptiles, and that a few insects, mostly of a coleopterous and orthopterous character, are eaten by way of variety. "The food of the young consists of grasshoppers and the flesh of birds and of small quadrupeds which are taken as prey. The external covering is removed, and the flesh is administered in small bits."—*Gentry*. "It alights on the borders of clear streams to drink—I have observed it in such situations—immersing its bill up to the eyes, and swallowing as much as was necessary to quench its thirst at a single draught."—*Audubon*. Nuttall says that when straitened for food it is fierce and predatory, prowling around the farm, will now and then seize a hen or chicken, which it snatches by making a lateral approach. He further observes that these depredations on the farm-yard happen, however, only in winter. "They are frequently seen near wet meadows, where mice, moles, and frogs are prevalent; and also feed upon lizards, appearing, indeed, often content with the most humble game."—*Nuttall*.

My examinations of one hundred and two birds of this species, revealed in eighty-one chiefly mice and small quadrupeds, also some few small birds; nine, chickens; three, quail; two, rabbits; one, ham-skin; one, a part of a skunk; one, a red squirrel; one, a grey squirrel; three, snakes.

#### The Red-shouldered Hawk.

Dr. Wood says: "This species subsists mostly on small birds and quadrupeds, now and then adding to their bill of fare a snake." Merriam says: "I once took from the stomach of one of these hawks a snake measuring twenty-two inches in length." Wilson informs us that he has taken the fragments and whole carcasses of ten frogs of various dimensions from the crop of a single individual. "If not successful in obtaining a supply of frogs, it will eat the flesh of dead animals or fowls, apparently with a good relish."—*Wood*.

Nuttall remarks that this hawk lives principally on frogs, and probably insects and cray-fish in the winter. Gentry tells us the food consists of small quadrupeds, and small birds generally, reptiles, and

many insects, and that the food of the young consists of fragments of quadrupeds, besides an immense number of young grasshoppers and beetles. Of thirty-six examinations which I have made of this species, twenty-three showed mice and small quadrupeds, grasshoppers, and coleopterous insects; nine revealed frogs and some few insects; in two, snakes and portions of frogs were present, and from the remaining two small birds, particles of hair and a few orthopterous insects were taken.

#### The Broad-wing Hawk.

Gentry says: "The food of this species consists of small birds, small quadrupeds, reptiles, and insects." When skimming athwart a meadow or some similar situation, it moves with trifling noise, and when it espies a reptile or a quadruped, pounces down upon it with the fleetness of an arrow, seldom missing its aim, and bears it away to an adjoining tree, where it feasts upon its still quivering flesh with self-complacency. When it visits the farm-yard, which it seldom does, there is manifested much of the fearless spirit of *lineatus*. It comes directly to the spot, and not in a stealthy, circuitous manner, after the manner of *borealis*, alights upon the summit of a tall tree, singles out its victim, and darts down upon it, bearing it away, even when the proprietor is within easy distance. The coolness and audaciousness of the act, for the time being, disconcert the actions of the latter, and entirely eclipse his presence of mind. In some districts, young chickens and goslings are the objects of these visits, but with us tame pigeons and the smaller fowls."—*Gentry*.

In speaking of this bird, Dr. Wood says: "Seldom, if ever, does it seize its prey on the wing, but secures it mostly on the ground, subsisting on frogs, snakes, mice, and small birds, devouring the latter without removing the feathers. This hawk in its habits is not as neat in preparing its food as most of its genus; holding its prey with both feet, it tears and eats without much regard to cleanliness or feathers."

In twelve specimens examined by myself, four revealed mice; three, small birds; four, frogs; one killed the 22d of May this present year, was gorged with cray-fish, with which were traces of coleopterous insects.

#### The Sparrow Hawk.

H. W. Henshaw says: "Its food consists chiefly of the various kinds of coleopterous insects and grasshoppers, of which it destroys multitudes: in fact, this last item is the most important of all, and where these insects are abundant I have never seen them recourse to any other kind of food."

Allen, in his "Ornithological Notes of the Birds on the Great Salt Lake Valley," says: "The sparrow hawk, however, was by far the most numerous of the *Falconidae*; thirty were seen in the air at one time near the mouth of Weber Cañon, engaged in the capture of the hateful grasshoppers which seem at this season to form the principal food of this and other birds." Audubon mentions that he had one of these birds tamed. It was allowed its liberty. "In attempting to secure a chicken one day, the old hen attacked him with such violence as to cost him his life." Dr. Wood says: "When they cannot readily procure their favorite food, mice and small birds are greedily devoured; and, according to a writer in the *American Naturalist*, they are not wholly devoid of the piratical habits of the Bald Eagle. 'A tame cat was crossing the street bearing a large mouse in her mouth; a spar-

row hawk came flying over and seeing the mouse in her mouth, made a sudden swoop and tried to seize it with its talons, but did not succeed. The hawk continued its attempts until they reached the opposite side of the street, when the cat disappeared under the sidewalk. If it catches a mouse that proves to be lousy and poor, it will leave it and seek another." Gentry writes: "Of all our falcons, it is the least timid and suspicious; and manifests nearly the courage and address of *columbarius*. Like the latter, it does not deserve the severe censure and cruel persecutions which are occasionally inflicted upon it. It is certainly regarded in some sections with less disfavor than any other species. The countless number of field-mice and noxious insects which it destroys, should command for it universal respect. It is certainly a great benefactor to agriculturists. It is too frail a creature to commit much mischief in the farm-yard. If it destroys a few young chickens occasionally, as has been asserted, the immense good which it accomplishes more than balances the mischief done. Its numerous visits to the barn-yard are not made with a view to depre-dating upon the farmer's poultry, but for the vermin which frequent his various outbuildings, and are so destructive to his stored grains. Let them be encouraged in their visits. They cannot carry away the adult hen, and as for the chicks, they are so well guarded by the mother that, only in rare instances, will this hawk have the hardihood to venture an assault upon the brood unless it be considerably scattered from the parent, when it will merely single out the most distant chick."

The stomach contents of twenty-nine of this species, which I have dissected, showed, in fifteen, principally mice, with frequently traces of various insects; six grasshoppers; two, coleoptera and grasshoppers; two, meadow larks; four, small birds—sparrows. Within the past four years, or since those much detested little outlaws—the House or English sparrows—have become so numerous about our towns and villages, these hawks, likewise, occasionally, the sharp-shinned and Cooper's hawks, very frequently during the winter season come into towns and about the buildings, and do a vast deal of execution among the hosts of the "little feathered usurpers."

#### The Cooper's Hawk.

Dr. Coues says, in speaking of this hawk: "Possessed of spirit commensurate with its physical powers, it preys upon game little if any humbler than that of our more powerful falcons. It attacks and destroys hares, grouse, teal, and even the young of larger ducks, in the state in which they are known as 'flappers,' besides capturing the usual varieties of smaller birds and quadrupeds. It occasionally seizes upon reptiles or picks up insects. In securing its prey it gives chase openly and drives down its quarry with almost incredible velocity." Dr. Wood writes that "it is bold and fearless, often diving within a few rods of the farmer and seizing his chickens, which it carries to its young or devours itself. If once introduced to the young poultry, you may rest assured of a daily call until all are gone, unless fortunate enough to secure the intruder. It sometimes attacks the full-grown poultry with success. A gentleman once informed me, that while standing by his wood-pile, close by the house, one of these birds dove upon a full-grown rooster, within six or eight rods of him. The fowl ran some two or three rods and dropped dead. The hawk soon returned to devour his game, as it was too heavy for him to carry

away, but his audacity cost him his life." Such exploits as these, however, are by no means uncommon, as is well-known to every ornithologist and poultry-raiser. Dr. Wood further says: "Its food consists of any kind of game that it can capture, often attacking and killing birds much larger than itself. Partridges, quail, pigeons, and young rabbits constitute no inconsiderable portion of its bill-of-fare inland, while on the sea coast, teal, young ducks, and many of the water birds satiate its rapacious appetite." Nuttall, in speaking of the dietary of this hawk, says: "His food appears principally to be birds of various kinds; from the sparrow to the rubbed grouse, all contribute to his rapacious appetite. In common with the sharp-shinned hawk, his depredations among the domestic fowls are very destructive."

Of twenty-seven birds which I have examined, fourteen showed the food taken to have been chickens; five revealed small birds—sparrows and warblers—*Dendroica*—two, quail; one, bull-frogs; three, mice and insects; two, hair and other remains of small quadrupeds.

#### The Sharp-Shinned Hawk.

According to Nuttall, "this species feeds principally upon mice, lizards, small birds, and sometimes even squirrels. In thinly settled districts, this hawk seems to abound, and proves extremely destructive to young chickens, a single bird having been known regularly to come every day until he had carried away between twenty and thirty." Nuttall relates a circumstance, where he was one day conversing with a planter, when one of these hawks came down, and without any ceremony, or heeding the loud cries of the house-wife, who most reluctantly witnessed the robbery, snatched away a chicken directly before them."

Henshaw says: "In the fall, when the small birds gather in favored spots about the streams, this little falcon is found in their midst, and selecting his victims as whim or appetite urges. They often choose the turtle doves, and swooping down in the midst of a flock gathered about a pool of water, almost invariably contrive to seize one of the birds ere the surprise caused by the suddenness of the attack is over."

Dr. Coues says: "It preys chiefly upon small birds and quadrupeds, captured in the dashing manner of all the species of this group, and, like its small allies, feeds to some extent upon insects."

Gentry remarks that "the food of this species consists mainly of small birds, but that quadrupeds, reptiles, and insects are eaten in great numbers."

I have opened fifteen of these falcons. Six of this number showed small birds; three, quail; one, mice; four, remains of young chickens; one, grass-hoppers and beetles.

It is not uncommon for this bird to keep in near proximity to sportsmen shooting, and snatch up, after having been shot, quail and other like-sized birds. Mostly, however, it happens that the hawk, with his life, pays for such bold robbery.

From my observations, it seems to me the Cooper's and sharp-shinned hawks—especially the former—merit only the hatred of the agriculturists and gunners.

The other species, previously mentioned, I do not consider should be shot and trapped whenever a favorable opportunity is offered.

In conclusion, I will simply give the result of dissections made by myself of other of our *Rapacia*, and will refrain from citing the observations of any other writers on their food, etc.

**The Rough-legged Falcon—"Tiger-hawk."**—(*Archibuteo lagopus*, var. *Sancti johannes*, Remu.)

An irregular winter visitant. Nine birds all showed their food to be exclusively field-mice.

**The Marsh Hawk—"Bog-trotter."**—(*Circus cyaneus*, var. *hudsonius*, Linn.)

Not uncommon in the autumn as a passing visitor, frequenting during its stay chiefly meadow lands. Can readily be distinguished from other hawks, when flying, by white feathers over the tail. Of eleven birds examined, five revealed mice; two, small birds—*Dendroica*;—three, frogs; one, a large number of grasshoppers with a small quantity of hair, evidently that of a young rabbit.

**The Duck Hawk**—(*Falco communis*, Gm.)

This hawk is a rare visitant in this section. I have never obtained but one specimen taken in Chester county, and the alimentary tract of this bird was void of all food. The gentleman, however, who presented it to me caught it in a steel trap, and advised me that it had robbed him of several fine hens.

**The Pigeon Hawk**—(*Falco columbarius*, Linn.)

A rare migrant, and winter resident. Two of the three specimens which I have obtained showed remains of the common pigeon. In relation to this pair of hawks, from my note-book I take the following: These birds during the late fall lurked about the southern suburbs of the borough of West Chester, preying at regular intervals on the pigeons of a blacksmith. In one week the hawks killed or drove away fifty of the birds. The hawks would enter the boxes and take from them the pigeons. The stomach of the other bird of the species was destitute of nutritious matter.

## THE OWL FAMILY.—FOOD, HABITS, &c., WITH SPECIAL REFERENCE TO SPECIES FOUND IN EASTERN PENNSYLVANIA.

By B. H. WARREN, M. D., *West Chester, Pa., Ornithologist of the Board.*

The owls constitute a division of the order *Raptores*, and inhabit every quarter of the globe; while certain species confine themselves to the ice-bound Polar regions, others find a congenial habitat beneath a tropical sun. They frequent both populous districts and desert tracts; generally speaking, however, woodland areas and meadow lands are their favorite resorts. Some few species obtain their food during the day, still they are for the most part nocturnal. During the daylight they remain concealed in hollow trees, caverns, or dense foliage, preferably cedar thickets, until the hour of twilight has arrived. They never feed on carrion, but subsist on such food as they are able to kill. Their dietary, although variable with locality and circumstances, consists mainly of small quadrupeds, (principally field mice,) insects, chiefly beetles and grasshoppers, and some few of the smaller kinds of birds. Many species are capable of living without

water for months at a time, though some of them drink it readily, and often bathe freely.\*

Most of the members of this sub-order lay from two to five round, white eggs, which are deposited in holes in trees, rocks, or the deserted nests of hawks and crows.

The owls, collectively considered, possess an apparently heavy, but in reality, slender body, and a large, broad, thickly-plumaged head. The plumage of the body is made up of long, broad feathers, and is so extremely soft and downy as to render the owl's flight almost noiseless. The coloration is, in most species, somber. The auditory organs are highly developed; the external ear in many individuals being furnished with a kind of lid, that gives material aid in the collection of the wave sounds.

It has been said that "all birds of the owl kind may be considered as nocturnal robbers, who, unfitted for taking their prey while it is light, surprise it at those hours of rest, when the tribes of nature are in the least expectation of an enemy. Thus there seems no link in nature's chain broken; nowhere a dead, inactive repose; but every place, every season, every hour of the day and night, is bustling with life, and furnishing instances of industry, self-defense, and invasion."

In Pennsylvania, we have eight species of the nocturnal *Rapacia*, viz: Great-horned, Long-eared, Screech, Short-eared, which constitute a class known as the tufted or horned owls; with the exception of the short-eared species all are resident in this Commonwealth. The second sub-division of this class, denominated Smooth-headed owls, includes the Barn, Barred, Snowy, and Acadian owls. Of the Barn and Snowy owls it may be remarked that neither breed in this State. They occur here as transitory visitants. The Snowy owl is indigenous to the snow-bound regions of the Arctic wilds. It is only during very severe winters that straggling individuals of this species wander as far south as Pennsylvania. The Barn owl, whose peculiar physiognomy has won for it the appellation "monkey-face," is a Southern bird.

The Acadian owl occurs here as a winter resident; not plentiful.

The Barred owl is also a species which does not breed in this section of Pennsylvania, where it is found as a winter sojourner.

While it is generally an accepted fact that owls are nocturnal in their habits, it is not true that they are exclusively so. The Smooth-headed owls are of a decidedly diurnal and crepuscular nature, and of the horned owls it might be added that in cloudy weather or in the early twilight it is by no means an unfrequent occurrence to see the Long-eared, Screech, and even the Great-horned owls sally forth in quest of prey.

The discordant, at times even hideous, voice of the owl has always been considered among the ignorant and superstitious as a presage of some sad calamity that was soon to ensue.

Illustrative of this superstition, an English writer says: "During my absence, the Barn owl had a sad time of it at Walton Hall. Its supposed mournful notes alarmed the aged house-keeper. She knew full well what sorrow it had brought into other houses when she was a young woman; and there was enough mischief in the midnight wintry blast without having it increased by the dismal screams of

\* Benjamin M. Everhart, a Chester county naturalist, had in captivity for a period of about two years a Great Horned owl, and during this time he says: "It never would drink water."

something which people knew very little about, and which everybody said was far too busy in the church-yard at night time. Nay, it was a well-known fact, that, if any person was sick in the neighborhood, it would be forever looking in at the window, and holding a conversation outside with somebody, they did not know whom. The game-keeper agreed with her in everything she said on this important subject, and he always stood better in her books when he had managed to shoot a bird of this bad and mischievous family. However, on my return from the wilds of Guinea, having suffered myself, and learned mercy, I broke in pieces the code of penal laws which the knavery of the game-keeper and the lamentable ignorance of the other servants had hitherto put in force, far too successfully, to thin the numbers of this beneficial, harmless, unsuspecting tribe.

"On the ruin of the old gateway, against which tradition says the waves of the lake have dashed for the better part of a thousand years, I made a place with stone and mortar, about four feet square, and fixed a thick, oaken stick firmly into it. In about a month or so after it was finished, a pair of Barn owls came and took up their abode in it. I threatened to strangle the keeper if ever after this he molested either the old birds or their young ones; and I assured the house-keeper that I would take upon myself the whole responsibility of all sickness and sorrow that the new tenants might bring into the hall. She made a low courtesy, as much as to say: 'Sir, I fall into your will and pleasure,' but I saw in her eye that she had made up her mind to have to do with things of fearful and portentous shape, and to hear many a midnight wailing in the surrounding woods. I do not think that up to the day of this old lady's death, which took place in her eighty-fourth year, she ever looked with pleasure or contentment on the Barn owl, as it flew round the large sycamore trees, which grew near the old, ruined gateway."

Having thus far made a somewhat desultory review of the owls, I now desire to call your special attention to the nature of the food of our native species. As these birds are generally inactive during the daytime, and obtain their prey at night, the generality of mankind are wont to regard them with disfavor, and attribute to them deeds of rapine, which certainly a careful study of their habits and food materials will not warrant.

Ignorance of the usefulness of the Raptorial birds, and superstitious notions on the part of the laity, have induced our Pennsylvania legislators to pass an act providing for premiums of fifty cents per head for hawks and owls taken in this Commonwealth. As a natural outcome of such legislation, we find trappers, hunters, and small boys ever on the alert to secure "scalps." By reference to the records in the Chester county commissioners' office, it will be seen that bounties amounting to over eight hundred and forty-one dollars have been paid on six hundred and sixty-six hawks and sixty owls within a period of less than six months. This sum of money has been taken from the county's coffers in the alleged "interest of agriculture." Stimulated by the sake of pecuniary gain, residents of this county have shot, caught, and trapped on all occasions every attainable hawk and owl. As such merciless slaughter progresses, we see the ubiquitous small boy and able-bodied men spare not even the half-fledged nestlings. In this connection, it might be added that with the exception of the Cooper's and Sharp-shinned hawks, all the species found in eastern Pennsylvania are among the best feathered friends that the

farmers have. This statement is especially true with regard to the Sparrow-hawk, the smallest representative of the North American falcons, which, unhappily, have been slain by dozens.

In returning to my subject proper, would state that I present to your consideration the views of certain of the most eminent ornithological specialists in America, and the result of fifty-odd stomach examinations of owls captured in Chester and Delaware counties during the last eight years.

This evidence and array of facts all tend to prove the great economic value of the owl tribe.

#### *Great Horned Owl.*

Audubon says: "Its food consists chiefly of the larger species of gallinaceous birds, half-grown wild turkeys, pheasants, and domestic poultry of all kinds, together with several species of ducks."

Wilson observes that "it preys on young rabbits, squirrels, rats, mice, partridges, and small birds of various kinds. It has been often known to prowl about a farm-house, and carry off chickens from roost."

Gentry, in *Life Histories of Birds of Eastern Pennsylvania*, says: "The food of this species consists of small quadrupeds, small birds, and insects. The poultry-yards are not safe from its nocturnal ravages. Instances are known where, in the course of a few nights, entire roosts have been completely destroyed. The food of the young at first consists of fragments of the animals and reptiles taken captive, besides various lepidopterous and coleopterous insects."

Nuttall tells us they usually prey on young rabbits, squirrels, rats, mice, quails, and small birds of various kinds; and when these resources fail or diminish, they occasionally prowl pretty boldly around the farm-yard in quest of chickens, which they seize on the roost.

Nuttall further writes: "My friend Dr. Boykin, of Georgia, says a Great-horned owl, prowling around his premises, saw a cat dozing on the roof of a smoke-house, and supposing grimalkin a more harmless, rabbit-like animal than appeared in the sequel, blindly snatched her up in his talons, but finding he had caught a Tartar, it was not long before he allowed puss once more to tread the ground."

My own records of sixteen examinations of Great-horned owls, which, with one exception, were all taken during the winter months, revealed in eleven individuals only remains of poultry; two others, portions of rabbits, and of the three remaining birds of this series it was found that one had taken two mice; another showed small amount of hair, apparently that of an opossum. The sixteenth and last bird contained a mouse and parts of beetles.

#### *The Long-Eared Owl.*

This species is probably the most abundant of all owls in eastern Pennsylvania, and unlike other of its congeners is, during the winter months, gregarious. Having had abundant opportunities of studying the food-habits of this bird in this section, I assert, without hesitancy, that its fondness for mice is such that it will not subsist on other food unless forced to do so. I have examined the stomachs of twenty-three Long-eared owls, and found that twenty-two of them had taken only these rodents; the other examination made of a bird taken in the late spring, showed some beetles and portions of a warbler (small bird).

Referring to this species, Audubon says: "It preys chiefly on quadrupeds of the genus *Arvicola*, and in summer destroys many beetles."

Nuttall observes: "Besides mice and rats, this species also preys on field-mice, moles, and beetles."

In conclusion, I would state that, not desiring to occupy too much space with the dry details of post-mortem researches, I have made special comment only on such owls as breed and are commonly known in this district (Chester and Delaware counties). The food materials of the other species of owls mentioned in the forepart of the paper do not materially differ from those of our native species.

In relation to the act of Assembly, passed June 23, 1885, generally known as the "scalp act," I desire to call the reader's attention to a report adopted at a regular meeting of the West Chester Microscopical Society, held March 4, 1886. In addition to said report, I take great pleasure in presenting to you letters from some of the most eminent naturalists of this country.

*The Screech Owl.*

Prof. Samuel Aughey, of Lincoln, Nebraska, writes that this species is largely an insect-eating bird, and in support of such assertion he presents the following results of dissections that he has made:

DATE OF EXAMINATION.	Locusts in stomach.	Other insects.	Remarks.
September, 1867, . . . . .	47	12	
September, 1867, . . . . .	32	8	Small bird.
June, 1868, . . . . .	41	22	
July, 1869, . . . . .		69	Mouse.
August, 1870, . . . . .		38	Mouse.
September, 1872, . . . . .		67	
September, 1874, . . . . .	50	16	
June, 1875, . . . . .	49	15	

Mr. L. M. Turner, of Washington, D. C., a member of the scientific corps of the Smithsonian Institution, informed me that he had dissected a number of screech owls, captured in Illinois at different seasons of the year, and had very generally found their food consisted of such insects as the larger beetles and grasshoppers; also, many field-mice.

In a series of fifteen examples of this species taken in Pennsylvania, I found that thirteen had fed entirely on insects and field-mice; two, small birds, sparrows.

THE BOUNTY OR "SCALP" ACT OF 1885.

By THE SECRETARY.

During its session of 1885 the Legislature enacted the following act for the destruction of wolves, wildcats, foxes, minks, hawks, weasels, and owls in this Commonwealth:

SECTION 1. *Be it enacted, &c.,* That for the benefit of agriculture and for the protection of game, within this Commonwealth, there is hereby established the following premiums for the destruction of certain noxious animals and birds, to be paid by the respective counties, in which the same are slain, namely, for every wildcat two dollars, for every red or gray fox one dollar, for every mink fifty cents, for every weasel fifty cents, for every hawk fifty cents, and for every owl, except the Arcadian, screech, or barn owl which is hereby exempted from the provisions of this act, fifty cents.

SECTION 2. It shall be the duty of any person, having killed any animal or bird mentioned in the first section of this act, and who is desirous of availing himself of the premiums therein provided, to produce such slain animal or bird before any magistrate, alderman or justice of the peace of the county, in which the same was killed, and make affidavit of the time and place of killing the same. *Provided,* That the pelt, if entire from the tip of the nose of any such animal, may be produced in lieu of the same, when so preferred; and upon the reception of any such animal, or pelt, or bird it shall be the duty of such magistrate, alderman or justice of the peace, in the presence of said person killing such animal, or bird, and one elector of the county, to cut off the ears of such animal or the head of such bird, and in the presence of said persons, burn the same.

SECTION 3. Upon the destruction of the ears or heads as aforesaid, the magistrate, alderman or justice of the peace shall give to the person producing such animal or bird, a certificate of compliance with the provisions of this act directed to the commissioners of the county, in which such animal or bird was slain, which certificate shall contain the following facts, the kind of animal, or bird killed, when, where and by whom killed, and the date by whom and in the presence of what elector the ears of said animal or head of said bird was destroyed, and upon the production of such certificate, the said commissioners shall give an order upon the county treasurer for the payment of the premium or premiums provided by this act; and it shall be the further duty of the magistrate, alderman or justice of the peace taking the affidavit, provided in the second section of this act, to file the same forthwith, or cause the same to be filed, in the office of the commissioners of the county, and upon filing the same, the said magistrate, alderman or justice of the peace shall receive from the county stock, the sum of twenty cents, in full compensation for all services under this act.

Quite early in 1886, the correspondence of the Board developed the fact that there existed among farmers, taxpayers, and the several county officers of the State, a widespread dissatisfaction at the workings and effect of the law. It also was evident that in some one of its many forms, this act would be brought to the notice of the present Legislature, and the Secretary of the Board deemed it advisable to collect all possible data on either side of the question, and place it in such a form as would be readily available when wanted. As a step in this direction, a circular was prepared and sent to every board of county officers in the State, asking for information upon the following points, viz:

1. The total amount of bounty actually paid from each county treasury up to November 1, 1886.
2. The effect (in the opinion of the officers,) of the repeal of the law so far as it affects hawks and owls.
3. The effect of the repeal of the whole law.

Answers to the first question gives us the following data, which show the amount paid by each county from November 1, 1885, to November 1, 1886. A number of the replies stated that the existence of the act did not become generally known until January 1, 1886, and that it would have been more in accordance with their experience to have fixed the time covered from January 1, 1886, to January 1, 1887. A number state that had this latter date been fixed, they would have increased the amounts paid fully twenty per cent., and in many cases more was paid in the two months ending December 31, 1886, than in any six preceding months. From this we are inclined to suppose that it will be perfectly safe to increase the amounts given below fully twenty per cent., in order to cover the total amount paid by each county. The reports give the following as the amounts actually paid between the dates given in the circular, viz: from November 1, 1885, to November 1, 1886.

Adams, . . . . .	\$3,800 00	Indiana, . . . . .	\$1,251 00
Allegheny, . . . . .	53 00	Juniata, . . . . .	584 50
Armstrong, . . . . .	1,255 30	Lackawanna, . . . . .	311 50
Beaver, . . . . .	282 50	Lancaster . . . . .	715 10
Berks, . . . . .	607 90	Lawrence, . . . . .	535 90
Blair, . . . . .	800 00	Lebanon, . . . . .	202 20

Bradford, . . . . .	1,666 55	Lehigh, . . . . .	267 50
Bucks, . . . . .	444 30	Luzerne, . . . . .	625 00
Butler, . . . . .	833 75	Lycoming, . . . . .	1,039 00
Cambria, . . . . .	1,181 10	McKean, . . . . .	1,023 57
Cameron, . . . . .	130 00	Mercer, . . . . .	2,319 70
Centre, . . . . .	1,827 05	Mifflin, . . . . .	357 60
Chester, . . . . .	944 50	Montgomery, . . . . .	85 20
Clearfield, . . . . .	1,500 00	Northampton, . . . . .	381 60
Clinton, . . . . .	325 00	Northumberland, . . . . .	566 70
Columbia, . . . . .	900 00	Perry, . . . . .	1,140 25
Crawford, . . . . .	8,022 90	Schuylkill, . . . . .	450 00
Cumberland, . . . . .	500 00	Somerset, . . . . .	1,600 00
Dauphin, . . . . .	450 00	Sullivan, . . . . .	300 00
Elk, . . . . .	350 00	Susquehanna, . . . . .	1,200 00
Erie, . . . . .	2,746 00	Tioga, . . . . .	1,169 00
Fayette, . . . . .	650 00	Union, . . . . .	410 00
Forest, . . . . .	350 00	Venango, . . . . .	952 60
Franklin, . . . . .	967 00	Warren, . . . . .	1,893 25
Fulton, . . . . .	700 00	Washington, . . . . .	727 50
Greene, . . . . .	1,200 00	Wyoming, . . . . .	800 00
Huntingdon, . . . . .	2,000 00		

The answers to the second and third queries (the effect of the repeal of the act so far as it applies to hawks and owls, and its total repeal) were answered by the respective county officers, as follows:

#### Replies of County Commissioners.

*Adams.*—"The law should be repealed except as to wolves, foxes, and wild-cats the repeal as to hawks and owls would be a saving to the county of \$2,500."

*Armstrong.*—"Repeal the whole act."

*Allegheny.*—"So far as this county is concerned, its repeal would not affect the number destroyed."

*Beaver.*—"The commissioners think that the whole act should be repealed."

*Berks.*—"Our opinion is that the whole act should be repealed."

*Bucks.*—"Think that the portion as to hawks and owls should be repealed; the balance of the act should remain as it now is."

*Bradford.*—"In the opinion of our county commissioners, hawks and owls are more beneficial to farmers than detrimental, but they are of the opinion that the whole act should be repealed for the following reasons:

1. It encourages hunting as an occupation.
2. Because the motives of self-interest will prompt the destruction of all these animals found doing damage.
3. Because of the drain upon the treasury."

*Blair.*—"The general impression is that the act should stand as it now is; there is no doubt that it is beneficial in our county and mountain districts. The effect of repealing the whole act would be very injurious, both to crops, domestic, and wild game. The law, as a whole, meets with general approval. The expense for the first year seems to be rather burdensome, but in the future it will be much less. There were some three hundred and fifty foxes killed since the law went into effect; and thus it will be but a short time until every destructive and noxious animal will be exterminated. What is true with regard to the fox is also true in relation to the others named in the act."

*Butler.*—"The act as a whole should stand as it is; that portion relating to hawks and owls should not be repealed."

*Cambria.*—"We favor the repeal of the whole law, and especially that portion referring to hawks and owls."

*Cameron.*—"The law should be repealed so far as it refers to minks, hawks, and owls. It has a tendency to encourage a certain class of men who devote their entire time to hunting."

*Centre.*—"We believe the act ought to be repealed as to hawks and owls. The effect of repealing the whole act would be a saving of thousands of dollars to the taxpayers annually. There would be about as many of the destructive animals and birds killed if the act was repealed, and by persons whose duty it is to protect their property. We emphatically favor repealing the entire act relating to bounties on scalps."

*Chester.*—"The opinion of the county commissioners and farmers generally is that the portion of the act referring to hawks and owls should be repealed. As to repealing the whole act, there is a difference of opinion. Many do not favor the repeal as to foxes, minks, and weasels. We have paid bounties on the following: Six hundred and sixty-six hawks, sixty owls, two hundred and eight minks, two hundred and forty-eight weasels, and one hundred and seven foxes."

*Clarion.*—"We believe that the entire act should be repealed. Its repeal would be a benefit to the taxpayers, and no disadvantage to the farmers."

*Clearfield.*—"Two thirds of the amount has been paid upon hawks and owls; minks, hawks, and owls should be abandoned; panthers, wolves, wild-cats, and foxes should be retained."

*Clinton.*—"Think there might be a bounty on wolves, wild-cats, and minks; would be satisfied with the repeal of the whole act."

*Columbia.*—"Repeal it as to owls, as they feed on mice, &c. The bounty should be continued on hawks, as they feed mainly upon poultry. Repealing the whole act would have no injurious effect; the foxes would be killed in this county just the same. Weasels destroy rats, mice, &c. Those who are injured by minks would kill them just the same without the law."

*Crawford.*—"The commissioners are of the opinion that the whole law should be repealed at the earliest possible moment. The commissioners are all farmers, and they consider the destruction of these animals and birds a great damage to the farmers; they are the farmers' best friends."

*Cumberland.*—"We do not see that our county will receive any benefit by continuing in effect any part of the act, and the repeal of the entire act will relieve the county of an unnecessary and unwarranted expense."

*Dauphin.*—"The repeal of the act would not affect the destruction of hawks and owls, as farmers, for self-protection, would destroy all they possibly could. Except as to wolves and foxes, we think the law should be repealed."

*Elk.*—"Repeal the whole act; there would be just as many killed."

*Erie.*—"It is our unanimous opinion that the entire act should be repealed; it is burdensome and inimical to the best interests of the farming community, and a useless expenditure of the county money."

*Fayette.*—"No complaints from the people at large. Much trouble to the county officers with the necessary papers, &c."

*Forest.*—"It would be wise to repeal the act as far as it refers to hawks, owls, and minks."

*Franklin.*—"The act ought to be repealed. Twenty-five wild-cats, four hundred and twenty-five foxes, one hundred and fifty-five minks, eighty-three weasels, six hundred and seventy-eight hawks, and sixty-eight owls."

*Fulton.*—"Our opinion is favorable to continuing the law as it now is."

*Greene.*—"Repeal the whole act, or at least that portion referring to hawks and owls."

*Huntingdon.*—"The law of 1885 should be repealed, and if any law is retained, it should be the same as the old law, having the orders directed to the county commissioners instead of to the county treasurers. It makes considerable extra work for the commissioners' clerk, and often puts persons entitled to an order to great inconvenience to have it signed by the county commissioners in order to get the money, as the commissioners in a majority of the counties only meet once each month. A majority of the people in the agricultural districts of this county would oppose a repeal of the act."

*Indiana.*—"Our opinion is that the bounty should be taken off everything mentioned in the act of June 23, 1885, and an act passed to pay a bounty for every skunk killed."

*Juniata.*—"The entire act should be repealed."

*Lackawanna.*—"We think that the whole act should be repealed, as it is a nuisance, especially so far as it refers to hawks and owls."

*Lancaster.*—"The repeal of the act would have a good effect so far as our county is concerned."

*Lawrence.*—"It is the unanimous opinion of the board that the whole act should be repealed, believing that the law is entirely unnecessary so far as our county is concerned. We have not heard one farmer in the county approve it, but many of them condemn it. Its repeal is earnestly requested by all who have any knowledge of its workings."

*Lebanon.*—"The commissioners think that the part of the law referring to owls and hawks should be repealed by all means. Aside from the above, (owls and hawks,) we pay very little bounty, as foxes and other animals are not sufficiently numerous to affect our county."

*Lehigh.*—"Repeal the whole act if it can be done; if not, then repeal that portion referring to hawks and owls, by all means."

*Lycoming.*—"Its repeal would disappoint the farmers in this county. In their opinion, instead of a repeal, skunks or pole-cats should be added."

*McKean.*—"Think that the whole act should be repealed, or at least that part referring to hawks and owls."

*Mercer.*—"We are radically in favor of the repeal of the whole act, and in this we are supported by the sentiment of the entire farming community of our county."

*Mifflin.*—"We favor the repeal of that portion which relates to hawks and owls, and leaving the remainder as it now is."

*Montgomery.*—"The repeal of that portion relating to hawks and owls would be good."

*Northampton.*—"We are not in favor of repealing the act, and prefer it as it now stands."

*Perry.*—"The repeal of the law would be worse than useless. The money already paid in would be thrown away. In the future, fewer animals and birds will be found and destroyed; the number will gradually decrease each year."

*Schuylkill.*—"The repeal or non-repeal of the law is immaterial to us."

*Susquehanna.*—"Favorable to a repeal of the act."

*Tioga.*—"The act referred to is a nuisance, and should be repealed as soon as possible."

*Union.*—"The commissioners recommend the repeal of the whole bill, except as to foxes."

*Venango.*—"We are in favor of the repeal of the whole act, believing that it would give entire satisfaction to the taxpayers of our county."

*Warren.*—"Repeal the whole act by all means."

*Washington.*—"It is the opinion of the commissioners that the only damage by hawks and owls is the destruction of our game birds, which is only felt by hunters; on the other hand, by the destruction of mice and other small vermin, they are beneficial to the farmer. The repeal of the whole act would be beneficial to our farmers."

*Wyoming.*—"The effect of the repeal would be good."

A number of the commissioners have appended to their reports a list of the number of each kind of animal or bird upon which bounty has been paid. As indicative of the relative proportion of the bounties upon each, we give the following:

*Chester.*—Hawks 666; owls, 60; minks, 208; weasels, 248; and foxes, 107.

*Franklin.*—Hawks, 678; owls, 68; wild cats, 25; foxes, 425; minks, 155; and weasels, 83.

Several of the commissioners state that the premiums upon hawks and owls constitute more than fifty per cent. of the total amount paid, while several of the commissioners call attention to the fact that wolves are enumerated in the title, but are not provided for in the body of the bill.

In addition to the collection of data in this direction, the Ornithologist of the Board, Dr. B. H. Warren, of West Chester, Pa., also had his attention directed to the actual results of the effect of the law: First, as it relates to hawks and owls; and, second, as a whole. The data which was collected by him is partially shown in an article in another portion of this report, and in a lecture delivered at the annual meeting of the Board in January last.

As a condensation of a large amount of correspondence upon this subject, which has reached the office of the Board during the past year, we give the following as covering the main points:

The act should be repealed because—

1. It causes a drain upon the treasuries of the respective counties which is not warranted by the results produced.
2. Hawks and owls, by the destruction of insects, confer a benefit which is much more than an offset for the poultry destroyed by them.
3. Increased duties are imposed upon county officers, for which no additional compensation has been provided.
4. In a number of cases, county officers have been imposed on, and bounties illegally drawn.

5. It encourages a certain class to follow hunting as a means of livelihood, and to the exclusion of other labor.

6. Self-interest would lead to the destruction of nearly as many of these noxious animals and birds.

7. The repeal of the act will, by the increase of the number of hawks, cause greater destruction of field mice, which destroy large amounts of clover and clover roots each year.

8. The payment of bounties for any purpose is based upon wrong principles, and should be discouraged.

The act should not be repealed because—

1. This being the first year of its action, the total amount paid will be greatly in excess of that of any subsequent year, and owing to the increased scarcity each year, the amount paid will be annually less.

2. By a repeal the good effects of bounties already paid would be practically lost.

3. The destruction of these birds and animals protects game.

4. All laws are liable to abuse and violation, and this one is no exception to the general rule.

5. The effect of a continuance of the law as it now is will be to increase the production of poultry and decrease its price.

The subject-matter of Dr. B. H. Warren's lecture having been declared open for discussion, the following questions were asked and answered:

**W. S. POWELL.** Will you please state whether you have examined the stomachs of weasels?

**Dr. B. H. WARREN.** No, sir; I never did; but I will refer you to a letter from the Ornithologist of the National Department of Agriculture at Washington. "There are two kinds of weasels in the Eastern States. The smaller kind live principally on mice and insects, or mainly mice and rats and sometimes have been known to kill poultry; but they do great good in the extermination of mice."

**J. A. GUNDY.** I would ask Dr. Warren whether he has made an examination of some of the larger hawks in the month of May; and whether it is not likely he would find more chickens in their stomachs at that season than now.

**Dr. B. H. WARREN.** Several have made examinations of birds of prey during the season, and their examinations are favorable, especially the Cooper's hawk, and the

sharp-shin. Examinations have been made of the Cooper's hawk in November; of the sparrow-hawk, in February, three; March, one; April, two; July, three; December, four; August, two; November, one. The red-shouldered hawk, in Eastern Pennsylvania, is generally most abundant during the winter, and is a rare bird in the months you mentioned; but examinations have been made in January, February, December, and November.

I have not had an opportunity to make a very large series of examinations of hawks during the summer months. Then they are not particularly abundant—I would of course not include the sparrow-hawk by this statement—during summer and spring. During the months of May, June, July, August, and September the hawks are not abundant in this State. You will find a few specimens. But you will notice that in the winter they are the most abundant.

**E. REEDER.** Will you tell us what kind of hawk that is that has such wide-spreading wings?

**Dr. B. H. WARREN.** That is the red-tailed hawk.

**E. REEDER.** Frequently it does not move its wings.

**Dr. B. H. WARREN.** That is the red-tailed hawk; it goes up highest.

**Prof. D. WILSON.** That one takes the chickens.

**Dr. B. H. WARREN.** There is no question but what they will. I have mentioned five red-tailed hawks that had chickens in them, and on which bounty has been paid; and the hawk-slayers have stated that they killed all the birds they had. Of the number I have given, but five had fed on chickens. The majority that had chickens in their stomachs were birds that were killed when there was snow on the ground. The beneficial birds are the red-tailed hawks. The little sparrow-hawk is not physically able to kill a good-sized chicken. These hawks in my opinion, only kill chickens when they cannot get mice; they unquestionably prefer mice.

**The PRESIDENT, (M. W. Oliver.)** The subject now open for discussion is: "Should the Scalp or Bounty Act of June 23, 1885, be repealed?" This leading question having been presented, will be argued *pro* and *con.* in reference to the act of June 23, 1885, best known perhaps as "The Scalp or Bounty Act" which provides for the payment from the county treasury, of a bounty of two dollars for each wildcat scalp, one dollar for each fox scalp, and fifty cents each for the scalps of minks, hawks, and owls. This discussion will include the presentation by the Secretary of statistics showing the amount of bounty paid by each county, and the opinions of the county officers as to the repeal of the act. The Secretary will present the statistics.

**Secretary EDGE.** I would state that, anticipating some action of this kind, I some time ago issued from the office of the Board a circular, which I sent to every board of county commissioners, and to every county treasurer in the State, asking their payments from the first of November, 1885, to the first of November, 1886.

Secondly, asking their opinion as to the repeal of the act, so far as hawks and owls are concerned; and, thirdly, their opinion as to the repeal of the whole act. If desired, I can give very quickly the amount paid by each county. Crawford county has paid eight thousand and twenty-two dollars, which makes it the banner county. You will remember this is up to November first. To the first day of January it was largely increased.

**A GENTLEMAN.** I can also add that the banner county had paid about ten thousand dollars up to the first of January.

**Dr. WARREN.** The total bounty paid by Chester county amounts in the neighborhood of about fifteen hundred dollars.

**Secretary EDGE.** Up to November first eighty thousand dollars had been paid in the State; and it is safe to say that one hundred thousand dollars had been paid by the end of the year.

**A GENTLEMAN.** Clarion county started out with sixteen hundred dollars to the first of November, and since that time it has been about three hundred dollars per month.

**Dr. W. S. ROLAND.** I did not hear from York.

**Secretary EDGE.** York made no report.

**A GENTLEMAN.** How about Bedford?

**Secretary EDGE.** No report.

**The GENTLEMAN.** Bedford has done very well. One man reported enough to make five hundred and fifty dollars on hawks alone.

(The reports from the county commissioners were then read in detail.)

**J. E. NOBLE.** Mr. President: In this connection I have a series of resolutions that were passed by Pomona Grange, No. 24, of Bedford, and concurred in by Granges Nos. 602 and 737. One of the resolutions refers to the matter under present discussion; and while I am free to say I do not concur with the Patrons of Husbandry in my county, I feel bound to present their action.

**Secretary EDGE.** Mr. President: Among the mass of correspondence relating to this act and its effects, which has reached the office of the Board, I have two letters from parties who have requested that they be read at this meeting and recorded as a portion of the discussion. They are as follows:

WILLIAMSPORT, PA., January 24, 1887.

Mr. President and Gentlemen of the State Board of Agriculture:

I do not take the affirmative side of the argument in relation to the repeal of the "scalp law;" because I cannot see the consistency of asking for the repeal of a law before it has been enforced a sufficient length of time to give it a fair trial; because,

in the very short time that it has been in force, beneficial results have already been reached.

The main argument advanced in favor of the repeal of the act is that it costs so much money to pay for all the scalps taken. If there were no animals to be scalped and paid for, and no poultry and game to be protected, of course no necessity would exist for the enactment. Surely, no one is hurt. The money is not carried beyond the limits of the State, not even out of the respective counties. It simply changes hands and circulates among the people—just the office that it is designed for.

During the year just closed, there were destroyed in Lycoming county one thousand seven hundred and eighty noxious animals, including hawks and owls for which the treasurer paid one thousand one hundred and ninety-seven dollars. The proportion for the previous year, from the time the act went into effect, was somewhat greater, from the fact that the animals commenced to decrease in numbers.

Poultry was never so plentiful and cheap in Williamsport as during the present season, and greater quantities were shipped to distant markets than ever before. Game was never more abundant in the history of Lycoming county. The cause of this is attributed to the destruction of owls, foxes, and minks during the winter of 1885 and 1886. Now, if each of the one thousand seven hundred and eighty animals killed and destroyed during the whole season, but a single brood of pheasants, or three or four young rabbits, or as many chickens and turkeys, the result would have been enormous, and yet it would have been but an insignificant amount for each animal to consume. The writer has known one pair of minks to destroy twenty-seven chickens during one night.

A single dealer in poultry and game in the city of Williamsport reports having handled two thousand seven hundred pheasants. Not quite so many rabbits. Of the pheasants, about one third were sent to distant markets, because the home market was overstocked, and we never had enough before to supply the home demand. It would be safe to estimate Lycoming county is richer at this time by more than the whole sum paid for the destruction of noxious animals since the passage of the act, from the money brought here by the sale of game alone, that never would have grown to reach a market but for the protection provided by this law.

The citizen manifests very little consistency who asks for an enactment to protect the game and fish of our forests and streams—to prevent hunting and fishing except for a few months in the year—while at the same time clamoring for the repeal of an act that prevents thousands of hunters and fishers from plying their vocation from day to day. Minks destroy thousands of trout after they ascend the smaller streams to their spawning places.

The citizens of this county do not want this act repealed because of its beneficial character, as is shown by the foregoing statements. The farmer desires it to remain on the statute books, so that he can raise more poultry and capture more game to sell to the inhabitants of the city and villages, and these want it to remain because prices are reduced on account of its superabundance. The farmer more than pays the additional tax by the extra quantity sold, and the citizen pays his from the amount saved in the reduction in price, and all are happy and contented.

Let the act, therefore, remain untampered with, at least until it has had a fair trial, unless it be to amend it to include in the list of noxious animals the skunk. By the way, it is currently reported here that this little animal was originally embraced in the list in the bill, but that somehow the vermin escaped—how, appears to be a profound mystery. The prevailing opinion, however, seems to be that one of the side-walk farmer members quietly shied him out with one bold stroke of his little pen, just before the bill was sent to the printers, because his grandmother instilled into him the idea that “skunks destroy myriads of insects.” That they occasionally, when eggs are scarce and high, devour a grub or two of the May-beetle species, and a few grasshoppers, that the turkeys which they ate in the shell would have gobbled up, no one denies. But if the eggs and young of the low mating birds of our State that are annually destroyed by them were allowed to hatch and mature, they would destroy more insects than all of the skunks in the land, and we would have a paradise of singing birds.

The amount to be paid another year will not probably reach one half that of this year, in consequence of the decrease in numbers from the wholesale slaughter. The average cost to each of our fifteen thousand taxpayers is seven cents. The owners of real estate, whose assessed valuation are respectively five thousand dollars, two thousand five hundred dollars, and one thousand dollars (real value ten thousand dollars, five thousand dollars, and two thousand dollars) contributed respectively thirty-five cents, seventeen cents, and seven cents towards the one thousand one hundred and ninety-seven dollars distributed throughout the county in payment for animals captured. The clerk and mechanic, having no real estate, whose occupation is assessed at five hundred dollars, paid each three cents of the sum, and no doubt saved the most of the amount on the first three pounds of chicken purchased. The laborer assessed at one hundred dollars had to “pool his issues” with his neighbor in order to contribute one whole penny.

Respectfully yours,

DANIEL STECK.

MIDDLEBURG, SNYDER COUNTY, PA.

THOS. J. EDGE, *Secretary Board of Agriculture, Harrisburg, Pa.*

DEAR SIR: I am a farmer, and interested in all of its different branches, and particularly in raising and growing clover, as thereby we can bring our land into a higher state of cultivation; but if the State allows and puts a bounty on all chicken-hawks, raising and growing clover will surely be one of the past things; for the field-mice cannot be held in check without the use of these birds. I have had half acres and more of clover destroyed, roots and all, in different fields by mice, and they not only destroy clover, but also young orchards. Last winter they destroyed thirteen young trees for me that were from two to three inches thick. With all my watching, they did this; and this winter they started in the same business. Now, if farmers are wise, they will demand the repeal of this bounty law. I may have lost a few chickens, or may lose a few each year by their depredations, but the good they do far overbalances the damage. Others may raise up and say that they kill toads and snakes, the farmer's friends; no doubt they do, but you would not find toads and snakes on agricultural land if the hawks killed them all; it is the farmer who kills them with his mower and reaper.

I cannot well estimate the damage to my apple trees, but it far exceeds what these birds have done me in my seven years of farming. As far as I can ascertain the sentiment of the farmers here, they want the law repealed. There are, however, farmers here who do not look upon it in this light, but it is ignorance, and if they would try and find out what these birds mostly live on, they would rise up and demand the law repealed. I have examined into this matter for several years, and every intelligent farmer will agree with me that they do more good than harm, and my wish is that you repeal this law. Please read this at the meeting of the Board.

Yours truly,

GEORGE S. SNYDER.

The subject being again open for discussion, the following ensued:

C. F. WICKERSHAM. Mr. Chairman, it is my privilege to represent the interest of East Lynn Grange, Patrons of Husbandry, No. 271, of Chester county, in this honorable body, who have assembled here, and at this time to consider the advisability of repealing what is generally known as the scalp law, and I was authorized by a majority vote of the grange to which I belong, and I am here in my feeble way to defend the law as it is now upon the statute-book, fully believing that it has had the desired effect that the Legislature contemplated when it received the sanction of that honorable body in protecting the poultry interest of the State, which is manifested in the destruction of so many of the vermin that infest the poultry yard, and if said law is allowed to remain in full force it will be but a few years until these pests are almost exterminated, and each succeeding year the expenses of same in way of bounties diminish. Mr. Chairman, I am fully convinced that the greater part of the opposition to this law is based solely upon the ground of taxation. Now this is not the standpoint from which we should consider this law. The question for consideration is, whether this law, as it now stands, is of an advantage to the farmers of this State, whether, by the destruction of these vermin, we sustain a greater loss than profit realized from increased sales of poultry. True, a certain class of people, or in other words, taxpayers of this State reap no benefit from this law. But if only the farmers are benefited, others, not engaged in agriculture, should forever hold their tongues so long as agriculture is so unfairly and unjustly taxed, while those engaged in other pursuits reap equal advantages accruing from same. It is claimed by the opposition to this law, that hawks are of untold advantage to farmers in the destruction of mice. Now, Mr. Chairman, all who are engaged in farming will admit that the greatest source of annoyance from mice is in barns, houses, mills, granaries, where a field full of hawks could not obtain access. I would like to ask the opponents to this law how many rats, hawks, and owls destroy; which every farmer knows is a greater source of less than the little insignificant mouse. One good family cat is of more value to the farmer than all the hawks and owls in his neighborhood. And as for the destruction of grass roots in one field, I am sorry to say that upon too many of our farms there is not enough grass remains in the fall in which mice can harbor, and in all the years before this law was passed by our Legislature, the destruction of mice by hawks and owls was hardly susceptible to the average farmer, but the destruction of poultry by the same was the annoyance of almost every house-wife who has used these means of obtaining a little pocket money, and now for husbands to set up a wail against a law which exists and benefits them in this little past time as it were, when these same men will spend more in less than a month's time for cigars than the extra amount of tax that is imposed upon them by this law, seems to me is inconsistent and mere child's play. I dare say there is many a wife who left a luxuriant home to share the fortunes of him who chose agriculture as his business in life, willing to share his burdens and misfortunes, and, at the same time, fully to enjoy all the blessings and luxuries that they might afford, as well as her companion, that has been sadly disappointed, and while through the toils of the day and quietness of the evening a tear has been seen to trickle down that care-work cheek as she looks back upon her maiden days when care was almost unknown to her, and a little private bank account to resort to when her heart yearned for some little article to adorn her person, or to satisfy the cravings

of her appetite. But, alas! how, different now with but one account and her husband paying-teller, and, at her request, reluctantly hands out a mere pittance, thinking the same fully requisite for her private expenses. I unhesitatingly say in every well regulated home there should be two pocket-books, and the raising of poultry has been adopted in many farm homes as the means of replenishing the wife's treasury: which she feels she has well earned, and dispose of it at her pleasure. Let us, as good husbands, assist and protect this little industry of the farm which should belong exclusively to our wives, that they may dispose of the returns in a manner that will afford them the most pleasure and satisfaction, and that will tend to lighten the many burdens that are forced upon them. Let us consider for a moment the extravagance of this scalp law. In the county of Chester, there are paid into the treasury for county purposes alone over one hundred and thirty thousand dollars, and there have been paid out in bounties for the year 1886 something over four hundred dollars, or, in other words, less than one cent bounty money for every dollar paid in. Now, the man that pays one dollar tax in Chester county one cent of the same is paid out for the destructive vermin. The county tax on one farm of one hundred acres is about twenty-five dollars and twenty-five cents of that amount has been paid out to some poor boy or man on account of this law. And in our county, for the year 1886, there has been destroyed eight hundred and twenty-seven hawks, two hundred and thirty-one minks, one hundred and eight owls, three hundred and thirty-four weasels and one hundred and eleven foxes; and can any one doubt for a moment but what the number of vermin will diminish from year to year, at this rate of deaths, and consequently the bounty grow less from year to year until it will be an insignificant sum?

Mr. Chairman, I would just ask this honorable body who it is that receives this bounty. Is it not generally needy and deserving poor, who is worthy of our charity, and the money used in the purchase of food and clothing, and if, perchance, a farmer or his sons succeed in trapping one of these vermin, does he not immediately receive all, if not more, than the law costs him? Be a little more energetic ourselves, and we stand a better chance of obtaining said bounties than any one else, as these vermin frequent our own farms. It will pay us far better than spending so much in coming here, prevailing upon our legislators to repeal a law that has scarcely been enforced. It would be more prudent if we would exert and use the same influence in the repeal of more obnoxious laws. There is more useless money spent in extravagant salary of one of our county officials than the whole amount paid out in bounties. I cannot see what possesses farmers to be so anxious about such a trifling thing as this, when there are so many grave wrongs existing among us, and we have not as much as raised our voice against them. Our ornithologists try to prove to us that the principal food of hawks are mice and not poultry, by the analysis of food found in their stomachs at the time of their capture, but that is not evidence enough to satisfy me that the hawk is of more advantage than disadvantage to the farmer. We know hawks captured late in the fall, and through winter, would be found to subsist almost entirely upon mice, as poultry is closely confined to barns and chicken-houses at that season of the year. In the spring and summer you all know that the poultry spreads around over the farm, and it is then that hawks destroy whole broods of young chickens. The grass has made such luxuriant growth in the fields that it is difficult for him to procure food in that direction, and young chickens being easier secured than mice, he devours them. It is during the winter season that most of the hawks are captured, and I presume it is from these that our ornithologist makes his analysis. Suppose you had a man in your employ, and you were well satisfied with the labor he performed, but you discovered that he occasionally plucked a chicken from the henery as he was leaving for home, how long would you keep him in your employ? A merchant may have a clerk in his employ who is a source of profit to him, he is efficient—polite to customers, and takes an interest in his business—but finally he ascertains that occasionally there is a shortage in the money-drawer, do you believe he would be long employed in that institution? Just so with the hawk; while he undoubtedly destroys some mice, upon which you cannot place any certain value, yet it is a fact, known to every poultry-raiser of any extent, that he destroys dollars' worth of poultry every year, and ought to be exterminated.

Let us be willing to throw every safeguard around this infant industry for the benefit of our women and children. We should be willing, and even anxious to expend as much for their interest and advantage as we do in worse than useless luxuries. Let us not be so ungrateful to those who are so self-sacrificing for our pleasure and profit; who are ever ready to administer to our requirements in the hour of sickness and affliction. They have no voice in the framing of our laws, but have to rely on our judgment and influence in such matters. The women of this State engaged in poultry-raising hailed the passage of the scalp law as glad tidings, and they also look upon the attempt to repeal the same so soon with displeasure. Almost every matron whom I have spoken to in reference to this law is heartily in favor of it, and I venture to say, if a vote was taken by the farmers' wives of this State, it would be almost unanimous in favor of this law. Let us not be prejudiced and self-interested. If the oleomargarine law benefits a certain portion of the farmers of our State, indorse it. If the inter-State commerce law benefits another class, indorse it. If protection benefits a majority of the people, we should not oppose it. And if the scalp law is of an advantage to the poultry-raisers, why repeal it? for agriculture must be diversified, or it will not be a success; and it is to the interest of us all that every industrial pursuit should receive the fostering care of our government.

A great many opponents to the scalp law say that the bounty does not cause a single vermin more to be destroyed, but merely brings those killed to our notice. Admitting that much of their argument, then their opposition must be based solely upon taxation, for, by their argument, the law is neither of advantage or disadvantage to farmers, as it neither lessens or increases the destruction of these vermin. If the bounty seems to be too extravagant, let us reduce it in some instances, but never repeal the law. And I do most earnestly desire that this body will not ask of our Legislature to repeal such a good law; and if such be the action of this body, I trust our representatives, in their wisdom and better judgment, will leave it severely alone.

Dr. J. P. EDGE offered the following:

*Resolved*, That for the protection of the useful birds and animals remaining in the State from wholesale destruction, suffered under the operation of the "scalp law," and also for the relief of the county treasuries, the General Assembly be requested to enact a law embodying the report presented by our Committee on Legislation.

Resolution seconded by Mr. SCOTT.

Secretary EDGE. Mr. President, I would announce that I propose, at the close of the discussion, to ask for the following votes upon the repeal of the law:

1. A vote by the Board: First, as to the repeal of the law referring to hawks and owls; and, second, as to the repeal of the whole law, unconditionally.

I also propose to call a vote of the audience upon the same questions, and in the same order.

R. S. SEARLE of Susquehanna. By a vote of Pomona Grange, No. 7, of Susquehanna county, which made me a delegate to speak for them at this State Board, it was unanimously resolved that I be directed to use my utmost endeavors to have the bounty act repealed. We paid to the last date in Susquehanna county, one thousand six hundred and forty-five dollars and some cents; and if we continue this bounty law, we shall be compelled to pay for about all the hawks, and owls, and vermin that are raised in New York State, before we can sensibly diminish the annual payments.

If there is any county in this State which desires the retention of the law, I should be perfectly willing in the repeal to except that county, it to have the privilege of paying for the killing of all the hawks and owls that fly within its boundaries. As long as the adjoining States do not pay bounties for the killing of these birds, our border counties will have excessive amounts to pay. You know that if the hawk and owl were all killed off as deleterious—and I do not believe they are—their places would soon be filled, if there should be anything left for them to eat. The law, at present, encourages a lot of vicious hunters, who prowl around the neighborhood of villages, as well as cities, trespassing on the lands of our farmers. They know there is such a law, and they claim the right under it to go wherever they choose. They fire their guns around our buildings, and kill all kinds of birds, and do not hesitate sometimes to kill our chickens. While this law may be desired in some counties, we do not desire it in our locality. We do not want these prowlers around our houses and gardens, and hunting through our woods. One hundred thousand dollars a year is no small item to take from the taxpayers of our farming communities—for about all the tax that is paid for these scalps comes from our farming communities. Furthermore, you may have noticed that the great bulk comes from the taxpayers of the poorer counties, while the lesser amounts are paid by the wealthier counties.

Mr. WHITE of Huntingdon. I would like to see the weasels added to the hawks and owls before a vote is taken; because we consider the weasel one of the farmer's best friends.

Secretary EDGE. My object was to separate the birds from the animals.

C. C. MUSSELMAN, of Somerset. I did not hear Somerset county spoken of and I am here to answer for Somerset. I made it my business to inquire of some of the farmers of that county, and I find the unanimous opinion of the people there to be that this scalp law should be repealed. We are opposed up there to scalping generally, especially the innocent. I have been farming for some thirty-five years, and during all that time I have not lost any poultry killed, by the species of birds and animals exhibited, to the value of five dollars. On the other hand, I will not tell you, because I cannot, how much benefit I have derived from their services. So far as the weasel is concerned, I am satisfied he is the farmer's friend; because he will come to the barn and rid it of rats and mice. Sometimes they will take a young chicken, but when they do too much of that sort of killing, the farmer will try to kill the weasel or mink without the encouragement of bounties, or things of that kind. The hawk I know feeds largely upon mice and vermin. I have watched them many a time. I have more than once seen a hawk capture a mouse, but quite seldom a chicken. Perhaps in a season a chicken or two will be killed by a hawk. On the whole, the county of Somerset wants this law repealed.

Prof. D. WILSON. I think, in the first place, that the Board ought to pass a vote of thanks to Dr. Warren for the light he gives on the food of these birds which he talked about this evening. I think it needs but to be generally known throughout the State to make up an almost unanimous opinion of the people against bounties being paid for hawks and owls, and perhaps the weasel ought to be included. Now, as the law stands, there is one serious objection. There has been a good deal of fraud practiced. It has been charged in our county that there has been a great deal of money taken out of the treasury by false representation—men taking the ears of common cats for minks, &c.,—and in many ways taking money out of the treasury without having killed anything at all. But I think the fox is of a family that hangs on the borders of civiliza-

tion all the time. He looks for his living not far from the poultry-yard. I think the fox and wolf and catamount ought not to be exempted, but I would be heartily in favor of exempting all the other animals, as well as the birds, from this law. I think there ought to be no quarter given to the fox.

I am here to represent the Farmers' Club of North Abington for the repeal of the bounty law. We had a full discussion in our club before we took the vote. We have a membership of over fifty, and it was clearly unanimous, with the exception of one vote. One man voted to retain the law if they would add the dog. Now, sir, I am in a peculiar situation. I am residing within ten miles of the city of Scranton, on the line of the Delaware, Lackawanna and Western railroad. It is but half an hour's ride from that city to my place. Hunters will come out with hounds, and pretend to be hunting foxes; but instead of foxes, they hunt rabbits; and I have known them to pull down fifteen or twenty yards of wall for one little rabbit. I had one excellent animal shot through the body, that I had to doctor for a good while. A widow lady had a cow shot and killed. I went to some of these hunters, and requested them to leave; I was afraid of my life. They replied that they had a license from the State; that this law gave them the privilege of killing these animals, and they to get the bounty.

I have the pleasure of being with two other delegates here, representing a Farmers' Club. They had the subject brought up about three weeks ago, and it was, I think, the unanimous vote that this law should be repealed. I understand that a man shot a fox, and thought he had killed it, without looking much further on the subject. A hunter came along and got a piece of it, and obtained the bounty. Another hunter came along, got another piece, and also received bounty. This process was continued, I am told, as long as a piece of that fox was left, the parties taking the pieces to a justice of the peace. One gentleman said that we cannot keep a wood-pile or a rail-pile in place anymore, for hunters will come along and tear them down; and they will shoot chickens if they find them out a little way. In our township, and I think I represent the county, we want the law repealed.

Dr. J. P. EDGE. Does not Prof. Wilson think any farmer in his county would shoot a fox, or wolf, or wild-cat, if he knew he would receive no bounty?

Prof. D. WILSON. A great many farmers keep no fire-arms around them.

Mr. HENDERSON of Huntingdon. I represent Grange No. 353, which is unanimously in favor of the repeal of the scalp act. They think it has been scalping the farmers, as well as the skunks and birds and animals.

H. M. ENGLE of Lancaster. I think if you get the sentiment, there is no better argument for the repeal of the act than the fact that it will keep hunters from entering our lands. I consider that is the greatest evil. We are not very much troubled with hawks and owls but we are with hunters. I do not object to a man making a dollar when he can, but I do not think there should be a law to permit him to run over our premises in order to do it. I am not particular in regard to the hawks and owls.

I was told about a week ago that hawks had been bred for their scalps, probably in Bedford county—at least some western county. I do not know whether it is correct or not; but at any rate, I think the hunter is the greatest nuisance.

J. A. GUNNY of Union. For myself, I would much rather have the birds trespass on my farm than a lot of hunters. Not long since I found one of my calves that had been shot by a spent ball very close to the jugular vein. The calf recovered from it. One of my men took a ball out of the mortar of my house, that had been shot in. I presume, by a hunter. A neighbor of mine received a shot in his leg while a scalawag shot at one of his chickens. Then, another neighbor of mine was shot while he was out plowing. He heard the report of the gun, but couldn't determine exactly who fired it. My old father, while passing across a field, heard the report of a rifle, and the whizzing of a bullet, but how close it came he did not know. It is an intolerable nuisance to a man living close to a village, as I live. I very much prefer the trespassing of birds and animals to the common hunter.

J. A. HERR of Clinton. I would be led to believe from the arguments of many of the gentlemen present, that hunting began just after this act was passed; and if it had not been for the Rebellion that our friend Smith refers to there would not have been any necessity for this act. I have not noticed any appreciable difference in hunting since the passage of the scalp law. There was hunting before, and there has been hunting since.

I do not understand that this act gives the right to indiscriminately hunt everywhere for noxious animals. If that is the result of the act, I have been misinformed. Again, a bounty for scalps of noxious animals, with the exception of hawks and owls, has been in operation for years; and in our section of the country, we have found no fault with it. I do object to the act so far as the hawks and owls are concerned, and shall vote for its repeal.

M. W. OLIVER of Crawford (President). It has been suggested that we take two votes: First, by members of the Board; and, secondly, by all present. The resolution has been read. The recommendation of the Committee on Legislation is that we recommend the repeal of the scalp act.

Secretary EDGE. My proposition is, first, that we take the vote of the Board as to the repeal of the law so far as hawks and owls are concerned; and then that a vote be taken of the entire audience.

Mr. ISENBERG of Blair. I have been requested by a couple of gentlemen present to make a statement in regard to this act. The reason that we assign for it is

this, (and I am the man who wrote the bill and read it in place, and tried to have it passed, and succeeded.) The statement that I want to make more particularly now is, that some of the gentlemen in this house certainly are laboring under a misapprehension in regard to certain portions of that act.

There is one gentleman on my right here who is either mistaken or his constituencies are very much at fault, viz: The case in which there were a number of scalps taken from the same pelt. Now those who did so were perjurers in the plain sense of the term. The old law permitted things of that kind, but it was repealed. The county which I have the honor in part to represent was very strongly in favor of the repeal of the old law; and a number of gentlemen appealed to me with a petition, containing not less than two thousand eight hundred signers, for the re-enactment of another bill; and it was then that I introduced the present act, and I think it is so worded that it is simply impossible to have more than one premium paid on any one scalp, unless it is done by the use of perjury.

Secretary EDGE. The bill specifically claims that the ears of the animal and the head of the bird shall be presented.

Mr. ISENBERG. When the claim is presented to the officer, it is his imperative duty to destroy that scalp before he gives the order.

As has been intimated by some gentleman on the right, [Mr. Herr,] it would appear by the arguments of some of these gentlemen that there had been no hunting done before this scalp law went into effect. I think that is certainly a mistake. Others argue that these animals would be killed, or would be hunted after by the hunters just as much without the premium as with it. Now if that is a correct statement of the case, the scalp law does not enhance or enlarge the hunting capacity. Therefore, I think that part of the argument fails.

In regard to the depredations committed by these vermin, I will give you an instance in my county, close by where I live. Two years ago a neighbor of mine, owning a farm of forty or fifty acres, had his attention called to the loss of his poultry, more particularly on account of the small acreage of his farm. He was trying to raise sheep and turkeys, ducks and chickens and so on. Inside of one week that gentleman (Mr. Bowers) lost seventeen lambs and thirty-seven turkeys, which he knew to be due to the depredations of the fox alone. Those losses to him amounted to more than ten-fold the amount of the tax that he would be called upon to pay on account of his property in support of the scalp tax. I make these remarks because I do not like to sit still and have the act misrepresented. I do not say it has been willfully misrepresented, though it has been placed in an untrue light by some gentlemen here—I take it for granted because of not having all the information they might have on the subject.

Secretary EDGE. Does this act materially change the present bounty paid as compared with that paid before?

Mr. ISENBERG. I think the bounty is the same. The great change is in the manner in which the bounty is obtainable. For instance, in our county a half a year ago a set of young scalawags got into the business of scalping, and they did it effectually, too. Some five of them in one year took from the treasury of Blair county I think over two thousand dollars. A mule died in our county—something very unusual—and these young fellows utilized the ears of the mule for scalps. I am sorry to say, too, that a part of that fraudulent transaction came through the fault of the justice of the peace. We had one justice who was not very particular in the way he transacted his business. These young fellows would manufacture scalps from the mule's ears, or whatever they could obtain, and would go to him and make oath that they had such and such scalps. The justice of the peace would look at the so-called scalp produced, and throw it out of the window, where there was another member of the party waiting to pick it up. When the mule was worked up, they used an old buffalo robe to accomplish their purpose. It is in view of this fact that the citizens of Blair county repeatedly asked that the old law be repealed, which was done, and we succeeded in having the new law passed.

R. S. SEARLE of Susquehanna. If there is just as much hunting since as before, why give them one hundred thousand dollars a year for hunting?

Dr. B. H. WARREN. How many species of owls did you indicate in the law?

Mr. ISENBERG. I cannot tell. I know I had the skunk in but it was stricken out by somebody from Chester or Delaware county. We had no scalp law for several years, and these noxious animals became very plenty. During the past few years, we have had plenty of hunters bent on their destruction, who have killed many, and the expense has been great. But if the law is permitted to remain in force, the expense will every year become very much less. It cannot help being that way.

M. W. OLIVER of Crawford. The vote will now be taken relative to the repeal of the hawk and owl clause, and then as to the repeal of the whole law.

A vote of the members of the Board relative to the repeal of that part of the law relating to hawks and owls was then taken, when twenty-one arose to their feet in favor of the repeal of the clause, and two rose up in the negative.

On the vote being taken relative to the repeal of the whole act, eighteen arose in favor thereof, and two rose up in the negative.

A vote was then taken expressive of the sentiment of the audience, thirty-seven rising up in favor of the repeal of so much of the scalp act as relates to hawks and owls. One arose in the negative.

Twenty-five rose up in favor of the repeal of the whole act, and one rose up as against.

Dr. J. P. EDGE called for the question on his resolution, which was read and adopted.

Adjourned.

## THE CHICAGO FAT STOCK SHOW OF 1886.

BY THE SECRETARY.

For several years past it has been the custom of the Illinois State Board of Agriculture to hold an annual exhibition of fat stock, horses, &c., at Chicago, and to so arrange the date that a series of meetings of the various National live stock organizations may be held during the continuance of the exhibition. In some cases it is necessary to hold three or four of these meetings each day, so as to bring all within the limit of the ten days assigned to the exhibition.

Owing to the outbreak of contagious pleuro-pneumonia near Chicago, the exhibit of 1886 was below the average in the number of fat and grade stock exhibited, but in the quality of those exhibited was fully up to former years, and will be difficult to exceed.

On entering the large exposition building near its center, we had in front of us the large ring for exercise and exhibition during the awarding of premiums. To the right, we have the horses arranged in close warm box-stalls, and to the left the cattle, sheep, and swine in open stalls. On entering, we obtain a catalogue of the exhibits, which, through the energy of Secretary Mills is a model, and which contains points which should claim the attention of those having charge of similar work in connection with our Eastern exhibitions. This catalogue furnishes the visitor with three entries, under different classifications, of each fat animal entered or on exhibition; among other items it gives the name of the animal, the number and location of its stall, its age November 9, 1886, its weight at the same date, its gain per day since its birth, its breed and color. At a glance, the visitor, with the catalogue in hand, can obtain all of the important particulars in relation to each animal in the building, and can then, from these items, draw his own conclusions.

After spending the greater portion of two days at the exhibition, we draw the following conclusions, which we have grouped under their appropriate heads in order to avoid confusion:

### Breeds.

One of the first things which strikes the Eastern visitor when passing among the cattle is the absence of the smooth Jerseys, which form so important an item in all our Eastern live stock exhibitions. In the west, the main object being beef, the great struggle is to obtain an animal which will give the feeder the greatest possible gain in live weight in a given number of days, a qualification which, of course, rules our Jerseys out entirely. Another striking point to us was the presence of the white-faced Herefords and the black hornless Aberdeen-Angus

cattle. Neither of these are yet fashionable with our Eastern breeders, from the fact that they are not noted as milking breeds.

As would naturally be supposed, the Durhams and their grades lead in numbers, but is also a matter of note that the white faces are annually gaining upon them in point of numbers, and in the number of prizes taken. It is also noted that in like manner the Aberdeen-Angus are pushing the Herefords. The result of the awards was such as will greatly encourage the Hereford and Angus men, and put the Durham breeders to still further efforts to preserve or regain their lost ground. Of the prizes offered, the Herefords and their grades took three fourths, including the live and dressed sweepstake prizes, and in the sum total of prizes exceeded all others.

The one hundred and eighty-two cattle on exhibition were divided according to breeds, as follows: Shorthorns and their grades, sixty-six; Herefords and their grades, fifty-three; Devons and their grades, twenty-one; Aberdeen-Angus and their grades, nineteen. In this classification, the stock was governed by the blood which ruled to the greatest extent. In all cases of an equal amount of two stock bloods, the characteristics of the animal were taken as fixing the stock and classification.

### Prizes.

The mode of awarding the prizes was entirely different from that practiced at our Eastern exhibitions, and was well calculated to bring out the major points of cattle-feeding. Two series of prizes were offered, viz: Live and dressed prizes. The first were awarded by judges, whose business it had been for a long series of years to judge fat cattle on the hoof, and who had little or no experience with dressed meat in the market form. The "dressed" prizes were awarded by men whose business brought them in contact with beef in the quarter, and who were not supposed to be judges of beef on the hoof. The latter did not see the animals alive, and were compelled to base their judgment upon appearance of the carcass only. In this way the two modes of judging were brought into direct competition, and in the hands of men of undoubted judgment. As a result, the steer which took first prize in the "dressed beef" test was passed by the judges "on the hoof" as unworthy of notice, and not above "average" in quality.

The first "slaughter or dressed beef" prize was won by Plush, a quarter Devon and three quarter Hereford steer. On the record he stands as No. 203, fed by Swan & Bosler, born September 13, 1884, weighed seven hundred and eighty-six pounds November 9, 1886, gained one and one ninety-six hundredths pounds per day during his life, and was red and white in color. His feed, in addition to grass, was oats and corn, varying from one half to three fourths oats; he had also consumed a small portion of oil-meal during one year of his life.

In all of the contests, a reference to the food brought out the fact that corn and oats, as a feed, took nearly all of the leading premiums. While Plush received the award, it was not without a contest, for the beef of the steer Clarence, (one half Shorthorn and half Angus,) was so nearly entitled to the award that the judges were "tied," and it was only by calling another that the point was decided.

In addition to the sweepstake prizes alluded to, others were awarded on age, animals being graded into classes of one, two, three, and four years. In this manner the carcass of Plush was adorned by two first-class or sweepstake ribbons.

It is seldom that an opportunity is offered of inspecting such an array of prize beef as was shown upon the long tables on the east side of the buildings. Carcasses of animals of all breeds, fed in many different ways, at many different points, all pampered and petted until they were fattened into what many would consider a deformity, all killed in public, and an exact account in weight taken of every part of the animal including blood and feet. All was carefully numbered, and exposed side by side upon narrow long tables, so that the visitor could carefully inspect each carcass and each quarter.

One of the sweepstake prizes was given to a fine Hereford steer, weighing over fifteen hundred pounds. His body, before killing, was the finest specimen of the celebrated "Parallelogram" form, so much sought after by breeders, and he gave as little waste in proportion to dressed weight as it would seem possible to do. His hair was short and very curly, and his success was a feather in the caps of the "curly-haired Hereford" breeders, and many were the remarks passed upon this peculiarity.

#### Killing.

In one end of the building, a portion separated from the main building by a light, open, low fence, was arranged all of the apparatus used at the largest slaughter-houses for killing and dressing beef for market. Here all the animals competing for the "dressed" meat prizes were killed, and every portion carefully weighed and a record kept. This department was constantly surrounded by a crowd under the charge of a policeman, and since the exhibition, our newspapers have been divided as to the propriety of carrying on the operation in public. It is true that everything was done in the quietest possible way. All of the animals killed were perfectly gentle and needed no ring, all being knocked down by one skillful blow, and with little or no struggling. To one interested in such matters, this exhibit was certainly interesting and instructive, and being open to the public, no charge of favoritism or unfairness could be made. All weights were taken by the Secretary of the Board of Agriculture in person, and were carefully noted down, and have been since tabulated in a convenient form for reference.

Special premiums were offered by parties not of the Board of Agriculture, for the rapid killing and dressing of animals; each contestant to furnish (subject to the approval of the secretary) his own animal, and to remove the carcass, &c., after the trial. In this test the animal was knocked down, bled, the fore-legs skinned to the knee-joint and removed, the head skinned and taken off, one hind leg skinned to the hock and cut off, but the other one to remain untouched; after the animal thus prepared was placed on its back, time was called. Each one was allowed a helper to hoist the animal. In deciding the contest, speed was not the only criterion, as attention was also given to the quality of the work. Under this test time was made which would be a matter of surprise to Eastern butchers and feeders. Of course, all were picked men from the large slaughter-houses surrounding Chicago, and care had been taken to stimulate the feeling existing between the men of different firms. Taking the quality of work into consideration, the best time made was ten minutes and twenty-five seconds. One butcher, in removing the skin, made two hundred and thirty cuts with his knife, and another two hundred and seventy. Men were competing of whom it was claimed that if allowed to go ahead as

they pleased, and without being governed by rules, could skin and dress an animal in five minutes their motions give promise of a fulfillment of this claim.

To the cattle-feeder this formed one of the most interesting features of the exhibition. The animals to be slaughtered were brought to the pen long enough beforehand to give all an opportunity to examine their points, to form an estimate as to how they would "open." Any one present, by listening to the remarks of the practical men congregated from nearly every State and territory in the Union, could hardly fail to carry valuable ideas away with him.

#### Feeding.

After a large number of "talks" with practical feeders present, I was thoroughly impressed with the idea that these exhibitions are doing much to educate feeders into new plans, and causing them to strive towards new points in form and in carcass. A writer for *The Country Gentleman* thus aptly expresses this view: "The end is here, but it is the first end of a course of common-sense feeding for beef. Heretofore we have bred for beef just as we have bred for pork. We ignored the fact that men will not eat beef fat as they do eat lard. Now that we are started on the right path, plenty of men will be found to follow to the farthest possible limit, and that is yet far away." The test there made showed very plainly that the point to be aimed at was to increase the carcass at points which produced the most valuable portions, and to decrease it in the items of loose fat and less valuable portions. The tables showing the weight of every part of the carcass and loose parts is worthy of the careful study of every feeder and breeder in the country, and much may be learned from it to serve as a guide to future operations.

#### Weights and Grain per Day.

The careful records made of the weight, age, and comparative points of each animal furnish material for reflection to all interested. The exhibition was not characterized by animals of extraordinary weight, the heaviest being McGregor, three fourths Hereford, one eighth Shorthorn, and one eighth native. He was one thousand six hundred and twenty-nine days old November 9, 1886, and then weighed two thousand five hundred and sixty-five pounds, showing a gain of one and fifty-eight one hundredths pounds per day during life. The greatest gain per day was that of Cruickshank, who weighed one thousand and seventy-five pounds when three hundred and twenty-three days old, or at the rate of three and thirty-three one hundredths pounds per day during life. In all cases, the table shows (other things being equal) that the greatest gains per day were in young animals, and that as the animal grew older, the gain in weight per day gradually fell off, until in some cases it was less than one pound per day.

The largest amount of dressed beef in proportion to the live weight was shown by a grade Angus, whose carcass showed seventy-two pounds of dressed meat to each one hundred of live weight. The worst record made was that of a grade Shorthorn, which gave but sixty-two pounds of beef to the one hundred of live weight. The largest amount of tallow taken from a single animal was from an Angus steer, which yielded one hundred and fifty pounds. The largest amount of blood taken from one animal was from an Angus steer, giving fifty-nine pounds. The heaviest hide was from a grade Hereford, (rather long hair,) and weighing one hundred and nineteen pounds.

Weights, Measurements, &c., of Prize-Winners at the Chicago Fat-Stock Show, November, 1886.

Catalogue number.	NAME OF ANIMAL.	NOV. 9, 1886.		MEASUREMENTS.										Girth of throat-latch.	Girth at middle of paunch.	Depth from loin to hook.	Length of quarter from the loin to the rump.	Width across the loins.	Length of back from top shoulder to loins.	Thickness through crops.	Depth from top line to lower shoulder point.	Plank girth.	Heart girth.	HEIGHT FROM GROUND.				Average gain per day from birth.	Weight in pounds.	Age in days.
		HEIGHT FROM GROUND.				Fore flank.	Plank.	Length of carcass.	Plank girth.	Depth from top line to lower shoulder point.	Thickness through crops.	Length of back from top shoulder to loins.	Width across the loins.											Length of quarter from the loin to the rump.	Depth from loin to hook.	Girth at middle of paunch.	Girth of throat-latch.			
		Shoulder.	Hip.	Fore flank.	Plank.																									
7	Wildy, . . . . .	1,372	2,260	1.65	4 7 1/2	4 9 1/2	1 9	2 2 1/2	7	7 10	7 7	2 9	2 2 1/2	1 10	4 3	9 1	3 7													
8	Sandy, . . . . .	956	1,865	1.85	4 4 1/2	4 9 1/2	1 9	2 2 1/2	6 4	6 11	6 10	2 3	2 2 1/2	1 11	4 3	9 1	3 7													
11	Black Prince, . . . . .	710	1,495	2.11	4 4 1/2	4 5	1 9	2 1	6	6 8	6 8	2 5 1/2	2 5 1/2	1 8	3 11	8 4	3 4													
12	Edison, . . . . .	688	1,330	1.85	4 4	4 4	1 7	2 5	6	6 8	6 8	2 5	2 5	1 8	3 8	7 8	3 3													
15	Paris Favorite, . . . . .	1,361	2,215	1.62	4 7	4 6 1/2	1 11	2 5	6 5	6 11	6 9	2 9	2 4	1 10	4	8 1	3 3													
17	Robert Peel, . . . . .	696	1,465	2.11	4 4 1/2	4 5 1/2	1 9	2 2	6 4	7	6 11	2 7 1/2	2 4	1 10	4	8 1	3 3													
20	Pontiff, . . . . .	636	1,385	2.18	4 4 1/2	4 5 1/2	1 9	2 2	6 4	7	6 11	2 7 1/2	2 4	1 10	4	8 1	3 3													
25	Grover, . . . . .	551	1,083	1.97	4 4 1/2	4 4 1/2	1 11	2 3	6 1	6 2	6 4	2 7 1/2	2 4	1 10	4	8 1	3 3													
39	Tempest, . . . . .	968	1,830	1.91	4 4 1/2	4 9 1/2	1 10 1/2	2 3 1/2	6 10	7 6	8	2 2	2 2	1 10	4 4 1/2	8 1	3 3													
43	Jucy, . . . . .	650	1,040	1.60	4 4 1/2	4 3	1 10 1/2	2 3 1/2	6 6	6 4	6 1	2 5	2 5	1 10	4 4 1/2	8 1	3 3													
44	Beely, . . . . .	654	1,095	1.67	4 4 1/2	4 4 1/2	1 11 1/2	2 4	6 5	6 4	6 1	2 5	2 5	1 10	4 4 1/2	8 1	3 3													
47	Captain, . . . . .	345	825	2.40	3 11	4 0 1/2	1 11 1/2	2 4 1/2	6 3	5 9	5 9	2 3 1/2	2 3 1/2	1 8	4 0 1/2	7 2	3 1													
48	Diamond, . . . . .	661	1,390	2.10	4 4 1/2	4 7 1/2	1 11 1/2	2 4 1/2	6 3	5 9	5 9	2 3 1/2	2 3 1/2	1 8	4 0 1/2	7 2	3 1													
49	Conqueror, . . . . .	951	1,790	1.88	4 9 1/2	5 10 1/2	1 11 1/2	2 4 1/2	6 11	7 7	7 9	2 7	2 7	1 8	4 4	8 10	3 7													
55	Cyclone, . . . . .	1,300	1,935	1.49	4 10 1/2	4 10 1/2	1 10	2 3	7	7 9	8	2 2	2 2	1 8	4 5	8 10	3 3													
49	Champion, . . . . .	1,252	2,055	1.64	5 1 1/2	5 0 1/2	1 11	2 6	7 7	8 6	8 3	2 4	2 4	2 4	4 7	9 4	3 3													
56	Morrow's Sharon, . . . . .	1,315	1,800	1.37	4 8	4 10 1/2	1 11	2 6 1/2	7 2	7 9	7 5	2 4	2 4	1 9	4 3	9 4	3 4													
65	Nigger, . . . . .	914	1,540	1.68	4 4 1/2	4 7	1 9	1 11	6 5	7 5	7 4	2 3	2 3	2 1	4	8 2	3 5													
67	Rudolph, Jr., . . . . .	883	1,330	1.73	4 4 1/2	4 6 1/2	1 9	1 11	6 5	6 9	6 9	2 3	2 3	2 1	4	8 2	3 5													
69	Sokje, . . . . .	1,264	1,335	1.06	4 4 1/2	4 6 1/2	1 9	1 11	6 5	6 9	6 9	2 3	2 3	2 1	4	8 2	3 5													
70	Brookbank Lad, . . . . .	639	1,290	2.02	4 4 1/2	4 7 1/2	2 0 1/2	2 4 1/2	6 6	6 6	6 6	2 9	2 9	1 10	3 10	7 11	3 1													
79	Edward 3d, . . . . .	674	1,090	1.62	4 0 1/2	4 3	1 7 1/2	2 1 1/2	5 11	6 4	6 5	2 7	2 8	1 11	1 6	3 8	3 3													
97	Cambridge Geneva, . . . . .	1,348	2,105	1.56	4 10 1/2	4 11	1 11	2 3 1/2	7 2	8	8 2	2 3	2 3	1 8	3 6 1/2	7 7 1/2	3 1													
100	Morse, . . . . .	310	825	2.66	3 11 1/2	4 1	2 0 1/2	2 3	5 7	5 5	5 8	2 1	2 1	1 8 1/2	4 5 1/2	9	3 5													
108	Stars and Stripes, . . . . .	995	1,870	1.88	4 7	4 8	1 10 1/2	2 4 1/2	6 6	6 6	6 6	2 1	2 1	1 5	3 4	6 4 1/2	2 9													
116	Royal's Royalty, . . . . .	331	865	2.76	3 10 1/2	3 11	1 10	2 1 1/2	5 5	5 8	5 7	2 3 1/2	2 3 1/2	1 8	4 4	8 9	3 5													
123	Sam Jones, . . . . .	338	980	2.90	4 4 1/2	4 1 1/2	1 9 1/2	2 2	6 6	5 10	5 7	2 4	2 4	1 5	3 3 1/2	6 6	3 3													
149	Slasher, . . . . .	870	1,735	1.98	4 5 1/2	4 7 1/2	1 8	2 2	6 8	7 6	7 6	2 4	2 4	1 10	1 6	6 10	3 3													
150	Tom, . . . . .	1,363	2,190	1.73	4 10	5	1 10	2 4 1/2	7 2	8 6	8 3	2 5	2 5	2 1	4 3	8 7	3 4													

165	Curley, . . . . .	921	1,005	1.09	4 2	4 3 1/2	1 10	2 3	5 9	6 1 1/2	6 1	2 5	2 5	1 10	1 6	3 7	3 1
175	Logan, . . . . .	556	1,295	2.33	4 3	4 5	1 11	2 2	6 4 1/2	6 6	6 9	2 6	2 6	1 8	1 8	3 6	3 3
177	Cruikshank, . . . . .	323	1,015	3.33	4 2 1/2	4 2 1/2	1 10 1/2	2 2 1/2	6 3	6 2	6 3	2 7	2 7	2 1	4 8	7 5	2 10
178	Jupiter, . . . . .	1,068	1,635	1.62	4 9 1/2	4 9 1/2	2 0 1/2	2 4 1/2	6 9	7 2	7 3	3 1	3 1	2 2 1/2	4 8	8 3	3 4
198	Dandy, . . . . .	355	945	2.66	3 11 1/2	4 2	1 11	2 2 1/2	5 9	5 10	5 10	2 4	2 4	1 9 1/2	4 1	6 10	2 10
199	Christmas Gift, . . . . .	318	925	2.92	3 10 1/2	4 0 1/2	1 9	2 0 1/2	5 7 1/2	5 10	5 11	2 4	2 4	1 8	3 5 1/2	7	3 3
206	Dick, . . . . .	1,298	2,300	1.77	4 8 1/2	4 9	1 11 1/2	2 3	7 2	7 4	7 6	3 3	3 3	2 2	4 3	8 6	3 3
207	Orto, . . . . .	1,002	1,745	1.74	5 2	5 2	2 2	2 2	7 2	8 5	8 1	3 4	3 4	2 6	4 6	9 4	3 8
208	Charley, . . . . .	481	1,200	2.70	4 4 1/2	4 5 1/2	1 11	2 5	6 3	6 4	6 6	2 5	2 5	1 11	4 6	9 4	3 8
209	Bullivar, . . . . .	318	980	3.02	4 4	4 4 1/2	1 10 1/2	2 5 1/2	6 3	6 4	6 4	2 7	2 7	1 8	3 8	7 7	2 10
212	Davidson, . . . . .	1,263	1,980	1.72	4 2 1/2	4 3 1/2	1 11 1/2	2 4	6 3	6 4	6 4	2 6 1/2	2 6 1/2	1 6	1 6	3 9	3 5
214	Bob, . . . . .	570	980	1.72	3 6	3 7 1/2	1 7 1/2	2 2 1/2	5 8	5 11	5 11	2 2	2 2	1 6	1 6	3 7	3 2
215	Bob, . . . . .	251	645	2.57	3 6	3 7 1/2	1 11	2 2 1/2	5 8	5 11	5 11	2 2	2 2	1 6	1 6	3 7	3 2
230	New Era, . . . . .	194	545	2.81	3 8 1/2	3 9 1/2	1 11	2 2 1/2	5 9	4 11	4 8	2 2	2 2	1 5	1 5	3 0 1/2	2 10
231	Mills, . . . . .	190	550	2.89	3 8 1/2	3 8 1/2	1 11	2 2 1/2	5 9	4 9	4 8	2 2	2 2	1 5	1 5	3 0 1/2	2 10
232	Newton, . . . . .	989	1,730	1.38	4 3	4 2 1/2	1 9 1/2	2 2 1/2	5 9	6 7	6 2	2 8	2 8	1 11	1 11	3 6 1/2	2 4
233	Morsel, . . . . .	1,009	1,375	1.33	4 5 1/2	4 6	1 10 1/2	2 3 1/2	6 2	6 8	6 8	2 8 1/2	2 8 1/2	1 11 1/2	1 11 1/2	3 9 1/2	3 3

Other Exhibits.

Of the two hundred and thirteen horses, sixty-one were French draft; seventy-five English draft horses; fifteen Cleveland Bay coach horses; five French coach horses; thirty-one ponies, and the balance trotters, pacers, &c. In size, they varied from the immense Clydesdale to the diminutive pony of one hundred and fifty pounds. Most of the horses exhibited were of well-known breeds and strains of blood, the main exception to this being the Cleveland and French coach horses. These, although they have been to a limited extent imported for several years, yet are comparatively little known. The Cleveland Bays, as their name would indicate, are bay horses with dark points. In size they are medium, running about sixteen to sixteen and one quarter hands. The French coachers are either bay or sorrel.

The one hundred and eighty-one sheep contained but comparatively few except the well-known Southdowns; a few Merinos, Leicesters, and Cotswolds were shown, but they made but a small showing when compared with the Southdowns.

The pigs numbered about one hundred, and were mainly Berkshires, Yorkshires, and Poland Chinas, a few other breeds having two or three representatives present.

The poultry exhibited included about one thousand good to fair specimens, mainly Light Brahmas, Wyandottes, and Plymouth Rocks. The dairy exhibit was small, and badly arranged and cared for; it was eclipsed by the adjoining exhibit of oleomargarine, which was not only tastefully arranged, but was also well represented all of the time. The admission of the exhibit of oleomargarine caused much unfavorable comment from the dairymen present, who did not consider that it was a proper exhibit for an enterprise conducted in the interest of farmers.

Weights of the Various Parts of Slaughtered Animals at the Chicago Fat Stock Show of 1886.

NAME OF ANIMAL.	Breed.	Age in days.	Gain per day from birth.	Live weight.	Pounds of blood.	Feet.	Head.	Tongue.	Liver.	Heart.	Lungs.	Paunch.	Intestines.	Tallow.	Trimings.	Hide.	Right hind quarter.	Right fore quarter.	Left hind quarter.	Left fore quarter.	Per cent. of carcass to live weight.
Cambridge Geneva	Shorthorn	1,348	1.56	2,050	55	21	36	7	15	7	16	162	84	114	10	93	340	359	348	363	68
Quality	Grade Hereford	1,348	1.50	1,795	47	19	35	16	16	7	16	158	42	106	9	94	285	302	290	304	66
Wjdy	Angus	1,372	1.65	2,165	50	21	38	12	14	6	19	141	32	130	7	103	370	391	355	410	70
Paris Favorite	Angus	1,361	1.62	2,165	59	22	35	12	16	6	22	141	48	144	5	105	387	392	392	399	69
Jerry	Grade Hereford	1,352	1.66	2,180	47	21	45	12	14	7	17	147	48	143	15	113	387	402	387	397	67
Cyclone	Grade Hereford	1,300	1.49	1,900	54	20	36	10	14	6	18	138	42	125	22	89	369	342	398	344	68
Jerry, 2d	Grade Hereford	1,261	1.52	1,905	50	21	36	9	15	6	17	205	35	83	11	118	366	318	296	320	61
Tom	Grade Hereford	1,263	1.40	1,760	51	19	36	9	13	5	15	188	47	73	13	101	271	300	275	299	70
Nerissa	Aberdeen-Angus	2,078	1.04	2,100	39	21	31	10	14	6	23	140	52	150	14	89	327	386	337	387	68
Compton	Grade Angus	926	3.61	1,390	28	15	26	9	8	5	15	81	36	78	12	74	225	260	229	263	70
Allen	Grade Shorthorn	767	1.78	1,350	30	17	27	8	12	5	18	165	32	50	9	82	201	215	203	222	62
Mathew	Grade Hereford	973	1.78	1,655	39	21	34	10	12	5	17	125	38	55	9	102	267	285	280	281	68
Norris	Grade Hereford	982	1.66	1,460	35	19	34	9	12	5	15	124	34	46	9	90	234	260	235	254	68
Clarence	Angus-Shorthorn	971	1.78	1,655	35	21	30	10	12	5	16	124	36	84	11	90	267	302	273	301	69
Richmond	Hereford	981	1.95	1,515	40	22	40	10	12	5	17	161	43	58	11	105	278	298	277	296	66
Plush	Grade Hereford	786	1.96	1,515	39	18	33	10	12	5	17	161	44	58	9	91	234	257	237	269	66
Conqueror	Grade Shorthorn	951	1.88	1,725	47	20	35	9	15	5	19	169	45	101	9	88	279	252	271	282	66
Rudolph, Jr.	Hereford	883	1.73	1,590	42	18	32	8	15	5	13	117	38	69	10	97	249	261	252	266	67
Newton	Devon	989	1.18	1,090	27	14	30	8	11	5	13	105	36	49	10	68	161	173	164	173	62
Nigger	Angus-Hereford	914	1.68	1,675	39	16	26	9	11	5	13	110	34	79	12	91	249	267	253	270	66
Dominionist	Grade Angus	539	2.15	1,635	23	15	24	6	9	4	11	114	30	54	11	77	189	195	188	196	72
Brown	Sussex	639	1.93	1,215	31	15	35	5	11	5	15	133	33	49	9	88	177	205	176	203	62
Edison	Aberdeen-Angus	683	1.95	1,295	32	15	35	7	9	5	12	113	45	73	8	85	193	219	199	225	64
Duncan Grey	Grade Angus	614	2.39	1,355	27	16	25	8	11	5	14	132	44	71	11	72	218	219	220	220	65
Alex	Aberdeen-Angus	667	2.13	1,410	31	19	28	8	8	5	13	125	70	51	7	89	232	239	232	239	67
Logan	Shorthorn	556	2.33	1,245	32	16	26	8	12	6	15	110	36	38	10	74	202	212	204	215	66
Scotch Grey	Grade Angus	599	1.99	1,160	25	14	21	6	11	5	15	82	37	47	10	65	181	175	181	181	65
Grover	Shorthorn	551	1.97	1,050	24	15	21	6	11	5	15	82	28	47	10	81	304	200	207	202	63
Brookbank Lad	Holstein Friesian	689	2.02	1,290	30	18	30	9	12	4	20	131	34	54	10	81	304	200	207	202	63
Mineralist	Aberdeen-Angus	641	2.19	1,350	35	17	27	9	12	5	12	102	39	56	10	97	221	231	219	231	66

LIST OF COUNTY AND LOCAL AGRICULTURAL SOCIETIES. With names and addresses of secretaries and dates for holding fall exhibitions of 1886. Both days named included. Compiled from official reports and sources by the Pennsylvania Board of Agriculture.

Those marked with a \* are represented in the Board of Agriculture by elected members.

COUNTY.	Corporate Name or Title of Society.	Name and Address of Secretary.	Where held.	When held.
Adams*	Pennsylvania State Agricultural Society,	D. W. Sells, Harrisburg,	Philadelphia,	September 6-18.
Armstrong*	Tri-State Exhibition,	R. H. Thomas, Mechanicsburg,	Williams' Grove,	Aug. 30-Sept. 4.
Do.	Adams County Agricultural Society,	J. S. Wiltherow, Fairfield,	Gettysburg,	September 21-23.
Do.	Western Pennsylvania Poultry Society,	C. B. Ethon, Pittsburg,	Pittsburg,	No fair.
Do.	Armstrong County Agricultural and Horticultural Association,	W. L. Peart, Kittanning,	Kittanning,	October 5-8.
Do.	Leeburg Agricultural Society,	E. Burchfield, Leeburg,	Leeburg,	No fair.
Do.	Dayton Agricultural and Mechanical Association,	W. R. Milliken, Dayton,	Dayton,	Sept. 28-Oct. 1.
Do.	Petroleum Agricultural Society,	Robert Belp, Parker's Landing,	Parker's Landing,	September 21-24.
Do.	Beaver County Agricultural Society,	J. G. Mitchell, Beaver,	Beaver,	No report.
Do.	Mill Creek Valley Agricultural Association,	W. S. Stevenson, Hookstown,	Hookstown,	August 24-26.
Do.	South Beaver Farmers' Club,	J. S. Elder, Darlington,	Holds no fair,	No fair.
Do.	Berks County Agricultural Society,	J. Amos, Bedford,	Bedford,	No report.
Do.	Keystone Agricultural Society,	C. T. Fox, Reading,	Reading,	September 21-24.
Do.	Blair County Agricultural Society,	S. H. Haffne, Kutztown,	Kutztown,	October 5-8.
Do.	Bradford County Agricultural Society,	M. A. Young, Hollidaysburg,	Hollidaysburg,	September 14-16.
Do.	Troy Farmers' Club,	J. A. Wilt, Towanda,	Towanda,	September 28-30.
Do.	Bucks County Agricultural Society,	C. E. Riggs, Canton,	Canton,	September 21-23.
Do.	Doylestown Agricultural and Mechanical Institute,	G. M. Card, Sylvania,	Troy,	September 14-17.
Do.	Butler County Agricultural Society,	W. Wynkoop, Newtown,	Holds no fair,	No fair.
Do.	Carbon County Industrial Society,	Thomas P. Miller, Doylestown,	Doylestown,	October 5-8.
Do.	Centre County Agricultural Society,	W. P. Roessing, Butler,	Butler,	September 14-17.
Do.	Chester County Agricultural Society,	J. W. Phillips, Zellenople,	Zellenople,	September 21-24.
Do.	Westgrove Farmers' and Gardeners' Club,	E. Bauer, East Mauch Chunk,	Lehighton,	September 21-24.
Do.	Octorara Farmers' Club,	H. H. Hershberger, Bellefonte,	Bellefonte,	No fair.
Do.	Clarion County Agricultural Society,	A. M. Eachus, West Chester,	West Chester,	September 23-25.
Do.	Clinton County Agricultural Society,	T. K. Stubbs, Oxford,	Oxford,	Sept. 29-Oct. 1.
Do.	Columbia County Agricultural Society,	D. H. Branson, Aiglen,	Aiglen,	No fair.
Do.	North Columbia and South Luzerne Agricultural Association,	M. Conrad, West Grove,	Holds no fair,	No fair.
Do.	Benton Agricultural Society,	D. H. Branson, Aiglen,	Holds no fair,	No fair.
Do.	Crawford County Agricultural Society,	Joseph H. Patrick, Clarion,	Clarion,	Sept. 28-Oct. 1.
Do.	French Creek Valley Agricultural Society,	A. Walters, Clearfield,	Clearfield,	Sept. 28-Oct. 1.
Do.	Central Agricultural Society,	H. W. Brown, Cedar Springs,	Holds no fair,	No fair.
Do.	Oil Creek Valley Agricultural Society,	H. W. White, Bloomsburg,	Bloomsburg,	October 13-16.
Do.		C. C. Evans, Berwick,	Berwick,	Sept. 28-30-Oct. 1.
Do.		J. S. Kline, Benton,	Benton,	October 6-9.
Do.		A. J. Harper, Conneautville,	Conneautville,	Sept. 29-Oct. 1.
Do.		J. H. Adams, Cochranon,	Cochranon,	September 13-17.
Do.		A. McMichael, Meadville,	Meadville,	No report.
Do.		J. B. Bramhill, Centreville,	Titusville,	September 21-24.

LIST OF COUNTY AND LOCAL AGRICULTURAL SOCIETIES—Continued.

Those marked with a \* are represented in the Board of Agriculture by elected members.

COUNTY.	Corporate Name or Title of Society.	Name and Address of Secretary.	Where held.	When held.
Cumberland,*	Cumberland County Agricultural Society,	L. F. Lyne, Carlisle,	Carlisle,	Sept. 28—Oct. 1.
Do.	Cumberland County Horticultural Society,	E. C. Gardner, Mechanicsburg,	Holds no fair,	No fair.
Dauphin,*	Dauphin County Agricultural Society,	W. H. H. Sieg, Steelton,	Harrisburg,	No fair.
Do.	Gratz Agricultural Association,	J. Hoffman, Lykens,	Grafz,	Sept. 21-24.
Do.	Upper Dauphin Agricultural Society,	D. M. Ferrer, Millersburg,	Millersburg,	No report.
Do.	Upper Dauphin Poultry Association,	J. S. Fenmel, Lykens,	Lykens,	No report.
Delaware,*	Agricultural and Industrial Society of Delaware County,	H. C. Snowden, Media,	Elwyn,	No report.
Do.	Taxpayers' and Agricultural Society,	A. Darlington, Concord,	Holds no fair,	No fair.
Erie,*	Chadds' Ford Farmers' Club,	A. Sharpless, West Chester,	Holds no fair,	No fair.
Do.	Eric County Agricultural Society,	G. A. Evans, West Mill Creek,	Erie,	September 21-24.
Do.	Central Agricultural Society of Union City,	A. G. Sweet, Union City,	Union City,	No report.
Do.	North-West Agricultural Association,	John Smuty, Corry,	Corry,	Sept. 28—Oct. 1.
Do.	Edinboro' Agricultural Society,	R. B. Temple, Edinboro',	Edinboro',	No report.
Fayette,	Wattsburg Agricultural Society,	W. W. Harwood, Wattsburg,	Wattsburg,	October 5-7.
Fulton,	Fayette County Agricultural Society,	R. F. Hopwood, Uniontown,	Uniontown,	October 6-8.
Greene,	Fulton County Agricultural Society,	J. W. Greathhead, McConnellsburg,	McConnellsburg,	No fair.
Do.	Greene County Agricultural and Manufacturing Society,	G. W. Daugherty, Carmichaels,	Carmichaels,	October 7-8.
Do.	Central Fair Association,	J. D. Lindsey, Waynesburg,	Waynesburg,	September 21-23.
Do.	Rich Hill Fair Association,	J. McElmurray, Wind Ridge,	Jacksonville,	September 8-10.
Do.	Sandy Plains Fair Association,	Dr. F. S. Blackley, Clarksville,	Clarksville,	No fair.
Do.	Greene County Stock Association,	J. K. Bailey, Jr., Khehive,	Huntingdon,	No fair.
Huntingdon,	Huntingdon County Agricultural Society,	W. W. Moore, Huntingdon,	Huntingdon,	October 5-8.
Indiana,*	Indiana County Agricultural Society,	J. T. Stuchul, Indiana,	Indiana,	September 14-16.
Jefferson,*	Jefferson County Agricultural Society,	S. H. Whitehill, Brookville,	Brookville,	September 21-24.
Do.	Punxsutawney Agricultural Society,	T. J. Cooper, Punxsutawney,	Punxsutawney,	October 13-15.
Juniata,*	Juniata County Agricultural Society,	J. P. Wharton, Port Royal,	Port Royal,	September 14-17.
Lackawanna,*	Lackawanna County Agricultural Society,	D. W. Jones, Scranton,	Scranton,	October 13-15.
Do.	North Lackawanna Farmers' Association,	J. L. Stone, Waverly,	Waverly,	No fair.
Do.	South Abington Farmers' Club,	W. H. Northrup, Glenburn,	Holds no fair,	No fair.
Do.	North Abington Farmers' Club,	J. L. Stone, Waverly,	Waverly,	No fair.
Lancaster,*	Lancaster County Agricultural Society,	M. D. Kendig, Creswell,	Holds no fair,	No fair.
Do.	Lancaster County Agricultural Fair Association,	J. B. Long, Lancaster,	Lancaster,	Aug. 30—Sept. 4.
Lawrence,*	Lawrence County Agricultural and Horticultural Society,	W. T. Butz, New Castle,	New Castle,	No fair.
Do.	Harlansburg Agricultural Association,	W. F. Leathers, New Castle,	Harlansburg,	No report.
Lebanon,*	Lebanon Valley Agricultural and Mechanical Association,	C. R. Lantz, Lebanon,	Lebanon,	September 14-17.
Lehigh,*	Lehigh County Agricultural Society,	L. P. Hocker, Allentown,	Allentown,	Sept. 27—Oct. 1.
Luzerne,*	Luzerne County Agricultural Society,	S. W. Townsend, Wilkes-Barre,	Wyoming,	September 21-24.
Do.	Wyoming Horticultural Society,	W. H. Jenkins, Wyoming,	Wyoming,	No report.
Lycoming,*	Wyoming County Agricultural Society,	J. B. Caryell, Williamsport,	Williamsport,	No fair.
Do.	Muncy Valley Farmers' Club,	W. Crawford, Hughesville,	Holds no fair,	No fair.
McKean,	McKean County Agricultural Society,	A. J. Hughes, Port Alleghey,	Port Alleghey,	September 7-10.
Do.	Mercer County Agricultural Society,	J. P. Hines, Stoneboro',	Stoneboro',	September 23-30.

Mercer,*	Merger Central Agricultural Society,	W. J. McKean, Mercer,	Mercer,	September 22-24.
Do.	Shenango Valley Agricultural Society,	W. T. Alan, Greenville,	Greenville,	No fair.
Do.	Keystone and Buckeye Agricultural Society,	W. E. Biel, Sharon,	Sharon,	No report.
Do.	Jonestown Agricultural Society,	W. Gambel, Jonesdown,	Jonestown,	No report.
Mifflin,	Mifflin County Agricultural Society,	S. L. McKinney, Lewistown,	Lewistown,	No fair.
Monroe,*	Monroe County Agricultural Society,	T. M. McIlhenny, Stroudsburg,	Stroudsburg,	No fair.
Montgomery,*	Montgomery County Agricultural Society,	J. Rex, Upper Dublin,	Ambler,	No fair.
Do.	Montgomery County Agricultural Society,	E. P. A. Pottstown,	Pottstown,	September 28-30.
Do.	Montgomery, Berks and Chester Agricultural Society,	W. M. Gearhart, Danville,	Danville,	No report.
Montour,*	Montour County Agricultural Society,	C. E. Shires, Washingtonville,	Washingtonville,	October 19-22.
Do.	Northern Montour Agricultural Society,	E. T. Greenwalt, Nazareth,	Nazareth,	October 5-8.
Northampton,*	Farmers' and Mechanics' Institute,	P. H. Field, Easton,	Easton,	Sept. 29—Oct. 2.
Do.	Northampton County Agricultural Society,	W. B. Chamberlain, Milton,	Milton,	No report.
Do.	Farmers' and Mechanics' Institute,	J. W. Kelsey, Milton,	Holds no fair,	No fair.
Northumberland,*	Northumberland County Agricultural Society,	A. R. Montgomery, Andalusia,	Germanstown,	No fair.
Do.	Milton Driving Park and Fair Association,	E. Lonsdale, Germantown,	Coudersport,	Sept. 29—Oct. 1.
Do.	Pleasant Valley Farmers' Club,	A. B. Mann, Coudersport,	Coudersport,	No report.
Philadelphia,*	Philadelphia County Agricultural Society,	A. S. Lynnan, Coudersport,	Coudersport,	Sept. 23—Oct. 1.
Do.	Germantown Horticultural Society,	G. H. Yeager, Orwigsburg,	Orwigsburg,	September 15-18.
Potter,*	Potter County Agricultural and Horticultural Society,	L. Applegate, Shenandoah,	Ringtown,	No report.
Do.	Potter County Fair Association,	M. Weitzel, Selinsgrove,	Selinsgrove,	No fair.
Schuylkill,*	Schuylkill County Agricultural Society,	J. H. Fritz, Somerseset,	Somerseset,	October 6-8.
Do.	Ringtown Agricultural Society,	E. A. Strong, Dushore,	Dushore,	September 22-23.
Snyder,*	Union Agricultural Association,	D. A. Tisworth, Montrose,	Montrose,	September 23-23.
Somerset,*	Somerset County Agricultural Society,	L. Tiffany, Harford,	Harford,	No report.
Sullivan,*	Sullivan County Agricultural Society,	C. McKinney, Great Bend,	Great Bend,	No report.
Susquehanna,*	Susquehanna County Agricultural Society,	Mart King, Mansfield,	Mansfield,	September 21-24.
Do.	Harford Agricultural Society,	J. W. Mather, Wellsboro',	Wellsboro',	September 22-24.
Do.	Great Bend Agricultural Society,	Reuben Klone, Lewisburg,	Lewisburg,	September 7-10.
Tioga,*	Tioga County Agricultural, Mechanical and Industrial Association	J. Miller, Franklin,	Franklin,	September 7-9.
Do.	Farmers' Agricultural Society of Tioga County,	A. S. Dalrymple, Warren,	Warren,	September 14-16.
Union,*	Union County Agricultural Society,	D. B. Jagger, Sugar Grove,	Sugar Grove,	September 14-17.
Venango,*	Venango County Agricultural Society,	A. G. Happer, Washington,	Washington,	No fair.
Warren,*	Warren County Agricultural Society,	W. Cowan, Warren,	Warren,	October 5-7.
Do.	Warren County Agricultural Society of Warren County,	T. M. Potts, Cannonsburg,	Cannonsburg,	No fair.
Do.	Warren County Agricultural Association,	W. Melvine, Burgettstown,	Burgettstown,	No fair.
Washington,*	Western Pennsylvania Agricultural Association,	J. B. Wilson, Washington,	Holds no fair,	No fair.
Do.	Union Agricultural Association,	J. Emory, Millsboro',	Holds no fair,	No fair.
Do.	Washington County Stock-Breeders' Association,	T. J. Ham, Honesdale,	Honesdale,	September 8-10.
Do.	Sandy Plains Fair Association,	P. W. Collins, Ariel,	Ariel,	October 13-15.
Do.	Wayne County Agricultural Society,	J. B. Laux, Greensburg,	Greensburg,	September 8-10.
Wayne,*	Jones Lake Farmers' Club,	N. P. Platt, Tunkhannock,	Tunkhannock,	No fair.
Do.	Westmoreland County Agricultural Society,	J. W. Wilcox, Nicholson,	Nicholson,	September 5-8.
Westmoreland,	Westmoreland County Agricultural Society,	E. Chapin, York,	York,	Sept. 23—Oct. 1.
Wyoming,*	Wyoming County Agricultural Society,	Mo. Smith, Hanover,	Hanover,	No report.
Do.	Nicholson Agricultural Society,			
York,*	York County Agricultural Society,			
Do.	Hanover Agricultural Society,			

OFFICIAL REPORTS OF COUNTY

CORPORATE OR OFFICIAL TITLE.	Date of organization.	Average cost of fall fairs.	Average attendance at fall fairs.
1. Adams County Agricultural and Horticultural Society,	1861	\$1,800	5,000
2. Armstrong County Agricultural and Horticultural Association,	1880	3,000	6,000
3. (Armstrong county,) Petroleum Agricultural Association,	1881	700	40,000
4. Berks Agricultural and Horticultural Society,	1852	5,500	5,000
5. (Berks county,) Keystone Agricultural and Horticultural Society,	1869	2,500	20,000
6. Blair County Agricultural Society,	1873	500	4,000
7. Bradford County Agricultural Society,	1853	5,000	6,000
8. (Bradford county,) Troy Farmers' Club,	1874	20,000	4,000
9. (Bucks county,) Doylestown Agricultural and Mechanical Institute,	1860	700	20,000
10. (Bradford county,) Union Agricultural Association,	1880	700	6,000
11. Butler County Agricultural Society,	1877	3,500	5,000
12. (Butler county,) Connoquenessing Valley Agricultural Society,	1874	750	6,000
13. Carbon County Agricultural Society,	1875	775	5,000
14. Chester County Agricultural Society,	1852	10,000	10,000
15. (Chester county,) Oxford Agricultural Society,	1870	375	11,000
16. Clarion County Agricultural Society,	1883	8,000	30,000
17. Columbia County Agricultural and Horticultural Society,	1855	1,500	6,500
18. Columbia, Northern, and Southern Luzerne Society,	1884	2,500	10,000
19. Dauphin County Agricultural Society,	1879	5,500	20,000
20. Erie County Agricultural Society,	1876	1,500	3,000
21. (Erie county,) North-Western Agricultural Association,	1870	800	3,000
22. (Erie county,) Wattsburg Agricultural Association,	1884	200	3,000
23. Greene County Agricultural Society of Carmichaels,	1886	3,500	14,000
24. (Greene county,) Richhill Fair Association,	1855	5,800	20,000
25. Indiana County Agricultural Society,	1879	5,000	14,000
26. Jefferson County Agricultural Society,	1879	3,200	25,000
27. Lackawanna County Agricultural Society,	1881	3,000	10,000
28. Lawrence County Agricultural and Horticultural Society,	1879	2,000	60,000
29. Lebanon Valley Agricultural and Horticultural Association,	1881	700	3,000
30. Lehigh County Agricultural Society,	1852	150	1,200
31. Luzerne County Agricultural Society,	1883	2,000	10,000
32. McKean County Agricultural Society,	1867	2,500	10,000
33. Mercer County Agricultural Society,	1888	8,000	25,000
34. (Mercer county,) Mercer Central Agricultural Society,	1885	2,500	10,000
35. Montgomery, Berks and Chester Agricultural and Horticultural Society,	1885	8,000	25,000
36. (Montour county,) Northern Montour Agricultural Society,	1871	2,500	10,000
37. Northampton County Agricultural Society,	1855	3,700	2,000
38. Northampton County, Farmers' and Mechanics' Institute of,	1885	600	10,000
39. (Northumberland county,) Milton Dairy Park and Fair Association,	1846	1,000	5,000
40. Susquehanna County Agricultural Society,	1878	750	2,000
41. Sullivan County Agricultural Society,	1879	1,600	5,000
42. (Schuylkill county,) Ringtown Agricultural Society,	1878	2,500	10,000
43. Farmers' Agricultural Society of Tioga County,	1880	2,500	10,000
44. Venango County Agricultural Society,	1884	3,000	5,000
45. Warren County Agricultural Society,	1884	8,000	10,000
46. Warren County Fair Association,	1874	700	5,000
47. Warren County, Union Agricultural Society of,	1885	10,000	12,000
48. Western Pennsylvania Agricultural Association of Washington County,	1856	4,500	5,000
49. Washington County, Union Agricultural Association of,	1885	1,500	8,000
50. Westmoreland County Agricultural Society,	1876	800	12,000
51. Wyoming County Agricultural Society,	1884	800	12,000
52. (York county,) Hanover Agricultural Society,	1884	800	12,000

AGRICULTURAL SOCIETIES.

On what plan conducted.	Number of shares of stock.	Par value of stock per share.	Present value of stock per share.	Number of acres inc'losed.	How controlled—owned or leased.	Amount of premiums on farm products.	Amount of premiums on farm machinery.	Amount of premiums on household crops.	Amount of premiums for trials of speed.	Average receipt from fall fairs.	Amount of premiums of fall fairs.	Amount of bounty from county.	Number.
Stock,	140	\$50	...	27	Owned,	...	...	...	...	...	...	\$100	1
Stock,	450	10	\$10 00	35	Leased,	\$1,500	D	\$300	\$1,000	\$3,000	\$2,500	100	2
Stock,	500	5	5 00	12	Leased,	300	D	100	700	1,500	800	...	3
Mutual,	...	...	...	40	Leased,	424	D	336	1,000	8,000	3,000	100	4
Mutual,	...	...	...	15	Owned,	200	\$200	150	...	650	...	...	5
Stock,	1	1 00	...	30	Leased,	...	...	...	...	700	...	...	6
Mutual,	...	...	...	18	Owned,	...	...	...	...	3,000	...	100	7
Stock,	2,600	10	5 00	20	Leased,	...	D	...	200	900	...	50	8
Stock,	230	10	10 00	20	Owned,	...	...	...	...	6,500	6,500	100	9
Stock,	189	25	25 00	24	Leased,	700	D	500	1,000	3,500	2,500	100	10
Stock,	200	10	5 00	14	Leased,	500	D	300	500	3,000	...	...	11
Stock,	500	20	15 00	21	Owned,	210	60	110	310	2,000	700	...	12
Stock,	1,225	10	8 00	22	Owned,	2,000	D	700	1,300	5,000	3,200	100	13
Stock,	760	10	3 00	22	Owned,	950	D	600	500	3,250	2,050	100	14
Stock,	300	20	20 00	25	Owned,	...	...	...	...	4,000	...	100	15
Mutual,	...	10	10 00	16	Owned,	700	D	600	700	2,000	...	...	16
Stock,	443	10	10 00	23	Owned,	...	25	...	860	2,400	...	...	17
Stock,	375	5	...	20	Leased,	800	D	200	590	2,000	1,500	100	18
Stock,	...	1	...	40	Leased,	500	60	300	200	1,500	100	...	19
Stock,	...	5	...	...	Leased,	...	...	...	4,000	2,000	...	...	20
Stock,	300	3	5 00	20	Leased,	300	D	100	140	900	600	...	21
Stock,	...	1	1 00	8	Owned,	100	100	100	100	800	800	...	22
Stock,	...	5	5 00	12	Owned,	600	200	200	150	1,000	1,500	...	23
Mutual,	400	5	5 00	12	Owned,	1,600	50	300	425	3,600	2,500	100	24
Stock,	287	10	5 00	12	Leased,	450	100	200	1,600	6,000	2,500	...	25
Stock,	560	25	25 00	25	Leased,	1,140	200	100	1,050	6,000	2,550	...	26
Stock,	1,000	10	7 50	37	Owned,	210	125	350	1,200	6,000	2,500	...	27
Stock,	290	20	20 00	10	Leased,	...	...	...	1,500	4,000	1,500	100	28
Stock,	735	10	25 00	13	Owned,	1,955	272	1,358	739	7,000	4,235	100	29
Stock,	80	15	15 00	50	Leased,	100	100	100	300	700	700	100	30
Stock,	25	100	100 00	17	Owned,	400	100	100	620	600	1,200	...	31
Stock,	600	10	10 00	28	Owned,	1,200	D	150	350	2,800	1,700	100	32
Stock,	1,000	50	50 00	41	Owned,	900	50	300	350	2,800	...	...	33
Stock,	500	10	10 00	67	Leased,	920	D	250	1,900	8,800	3,071	...	34
Stock,	6	150	150 00	15	Leased,	400	75	200	550	2,500	1,500	...	35
Stock,	325	10	10 00	...	Owned,	...	...	...	...	...	...	100	36
Stock,	1,000	25	20 00	37	Owned,	79	58	241	1,500	...	375	...	37
Stock,	240	25	25 00	17	Leased,	...	...	...	900	2,900	1,420	...	38
Mutual,	...	...	...	20	Owned,	200	100	200	...	800	100	100	39
Stock,	...	...	...	6	Leased,	500	...	200	...	700	100	100	40
Mutual,	...	...	...	17	Owned,	250	50	100	600	1,850	1,000	...	41
Stock,	500	4	4 00	15	Leased,	300	150	300	500	...	1,500	100	42
Mutual,	...	...	...	30	Leased,	...	...	...	500	5,000	2,000	100	43
Stock,	3,000	1	1 00	11	Leased,	...	...	...	...	7,700	3,000	100	44
Mutual,	...	...	...	22	Leased,	1,200	800	500	1,400	...	...	100	45
Mutual,	...	...	...	20	Leased,	...	...	...	...	2,000	1,200	100	46
Stock,	400	50	50 00	42	Owned,	...	...	...	...	...	...	...	47
Mutual,	...	...	...	18	Leased,	45	90	425	333	3,135	2,000	100	48
Stock,	40	50	50 00	50	Leased,	1,500	...	800	1,500	5,000	3,900	100	49
Stock,	65	25	25 00	26	Leased,	1,000	200	200	500	2,500	...	...	50
Stock,	420	25	22 00	23	Owned,	500	...	500	1,500	4,000	2,900	...	51

TABULAR WEATHER REPORT FOR THE YEAR ENDING DECEMBER 31, 1886.

By J. L. HEACOCK, Esq., Quakertown, Pa., Meteorologist of the Board.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Averages and amount of rain fall, etc., for the year.
Highest temperature, . . . . .	53	55	69	77	77	77	86	86	86	76	68	49	71.08
Lowest temperature, . . . . .	4	4	8	29	40	46	50	47	41	24	21	6	25.83
Average temperature, . . . . .	28.97	28.46	35.61	50.30	55.97	62.83	68.48	67.16	63.33	53.29	41	25.93	47.61
Greatest temperature, mean, . . . . .	30.70	33.18	42.97	60.23	64.87	71.60	77.13	77.84	72.73	62.03	49.63	33.89	58.10
Lowest temperature, mean, . . . . .	17.09	18.50	23.23	40.73	47.39	54.33	59.23	58.61	53.96	43.68	32.53	17.81	39.09
Daily range of temperature, greatest, . . . . .	29	30	21	33	32	23	26	26	30	33	24	31	28.75
Daily range of temperature, least, . . . . .	4	5	7	3	4	8	10	6	4	4	6	6	3.38
Daily range of temperature, average, . . . . .	13	15.57	16	19.50	17	17.27	18	17.23	18.43	19.26	17.01	16	17.03
Monthly range of temperature, . . . . .	30.08	29.77	29.72	29.83	29.64	29.60	29.55	29.64	29.75	29.82	29.74	29.81	45.41
Barometer, highest, . . . . .	28.20	28.18	28.61	28.71	28.96	28.88	29.10	29.01	29.04	29.17	28.88	28.82	28.85
Barometer, lowest, . . . . .	29.31	29.36	29.33	29.42	29.29	29.31	29.29	29.32	29.43	29.49	29.31	29.41	29.35
Barometer, average, . . . . .	29.31	29.36	29.33	29.42	29.29	29.31	29.29	29.32	29.43	29.49	29.31	29.41	29.35
Barometer, daily fluctuations averaged, . . . . .	13	13	10	07	06	08	04	05	07	08	12	09	07
Amount of rain fall and melted snow, . . . . .	3.68	5.74	4.16	2.64	6.66	5.06	4.84	.68	1.17	2.65	4.89	2.43	44.93
Number of days upon which rain and snow fell, . . . . .	13	7	2	4	10	7	8	1	7	5	7	9	83
Number of days fair, . . . . .	4	4	7	5	10	1	2	2	8	5	3	5	41
Number of days clear, . . . . .	11	12	15	16	14	16	18	21	12	17	18	10	180
Number of days cloudy, . . . . .	3	5	7	5	7	6	3	7	3	4	2	7	59

REMARKS.—Elevation of surface of mercury in cistern of barometer above sea level, about 536 feet. Correction for instrumental error of barometer used, 140, and every observation reduced to 32 degrees. Kind of rain-gauge signal service, and the height thereof above ground, 6 feet 1 inch. Self-registering thermometer used. Daily mean temperature is for the 24 hours. No unusual weather to note for past year, except during the months of August, September, and October there was quite a drought—water scarce. Farmers had a difficult time to get their fall seeding done on account of the ground being hard.

**END OF NUMBER**