

A Professional Profile of Diplomates of the American Board of Forensic Anthropology: 1984–1992

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ABSTRACT: The updated 1993 membership directory of the American Academy of Forensic Sciences lists 163 members in the physical anthropology section. Of these, 38, or approximately 23%, have completed the process of certification and are diplomates of the American Board of Forensic Anthropology.

In lieu of periodic re-examination, the board requires that each diplomate provide an annual report of professional activities to maintain certification. This information forms a database concerning sources of casework, case types, expertise requested, court activities, and other professional pursuits engaged in by diplomates.

Statistics are presented concerning the professional activities of board certified forensic anthropologists in 1992. Trends for the period 1984 to 1992 are analyzed.

KEYWORDS: physical anthropology, forensic anthropology, ABFA, board certification, diplomate activities, professional profile

Forensic anthropology is a subspecialty within physical anthropology whose practitioners work in a medico-legal context. As with specialized physicians and other forensic scientists, its members regulate themselves through a process of board certification.

The American Board of Forensic Anthropology was established in 1977 under the auspices of the Law Enforcement Assistance Administration, the American Academy of Forensic Sciences and the Forensic Science Foundation, and was approved by the Physical Anthropology Section of the Academy [1]. The Board functions to establish and maintain standards of proficiency and training in forensic anthropology, to conduct examinations for individuals wishing certification, to certify the competence and training of those who pass examination and meet all requirements, and to circulate the names of certified forensic anthropologists to the courts and other qualified users.

The updated 1993 membership directory of the American Academy of Forensic Sciences lists 163 members in the Physical Anthropology Section [2]. Of these, 38, or approximately 23%, have completed the process of certification and are diplomates of the American Board of Forensic Anthropology.

Since 1984, in lieu of periodic re-examination, the Board has required that each diplomate provide a report of that year's profes-

sional activities to maintain certification. The annual update requests information on the source of cases by agency (local law enforcement, medical examiner/coroner, state/provincial police, sheriff, military), the source of civil cases (defense or plaintiffs' attorney, insurance company, private, etc.), and the geographic source of cases (one's own state or province, other states or provinces, outside the U.S.).

Diplomates are asked to supply information on case types (fresh, decomposed, mummified, burned, isolated skull, skeletal, etc.), on non-forensic material initially presented as forensic (animal, prehistoric, or historic human), and on procedures (scene searches, dental identifications, microscopic bone or dental aging, facial reconstructions, photographic superimpositions or comparisons, etc.).

Finally, diplomates are asked to report on court related activities (depositions, testimony, written reports, etc.), on whether they appeared for the defense or plaintiff/prosecution, on the nature of the trial (civil or criminal), and on the nature of their expertise (identification or trauma analysis).

The information provided by diplomates forms a database for analysis of caseload distribution among Board certified forensic anthropologists. It allows the examination of historic trends, and it clarifies the current patterning of activity among practitioners in the field.

The following is a summary of what diplomates of the American Board of Forensic Anthropology have been doing since 1984, and how they are currently engaged. Since, at the time of this writing, data for 1993 were not yet available, results are reported through 1992.

Trends: 1984–1992

As Fig. 1 indicates, the total number of cases reported by diplomates has increased steadily over the past eight years. In 1984, 29 diplomates reported a total of 571 cases. In 1992, 38 diplomates reported a total of 1630 cases. This rise is due in part to an increase in the number of diplomates. In 1984 there were 32, of whom 29 reported; in 1992 there were 39, of whom 38 reported. While the number reporting increased by 31%, the total number of cases increased by 185%.

In 1984 diplomates averaged 17.8 cases each. Only two individuals examined over 50 cases. No one reported a caseload of 100. By 1988 the total number of cases had increased to 1072 (31, or 83%, reporting), bringing the average up to 34.6 cases per diplomate. Five diplomates reported caseloads over 50, and two reported caseloads in excess of 100.

In 1992 the caseload average had risen to 43 per diplomate. Twelve diplomates reported caseloads of 10 or less, 17 reported

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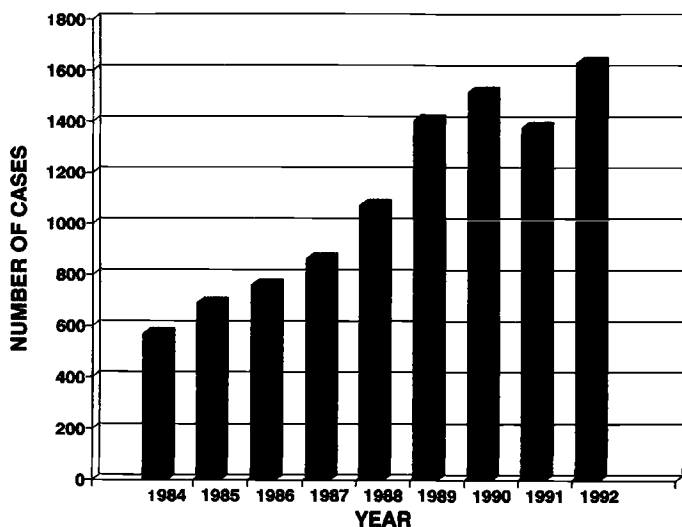


FIG. 1—Total number of cases reported by ABFA diplomates, 1984-1992.

caseloads of 11 to 50, 3 reported caseloads of 51 to 99, and 6 reported caseloads in excess of 100.

Cases by Source Agency

Figure 2 plots the number of cases reported by source agency between 1984 and 1992. Several trends are obvious. There has been a steady rise in almost all categories. The largest number of cases, as well as the sharpest increase, has been in the medical examiner/coroner category. In 1984 28 cases were reported as derived from medical examiner/coroner offices. By 1988 this had risen to 396. In 1992 the total was 848. This represents a 2928% increase over eight years!

Conversely, the military category reflects a decrease in recent years. There is a sharp increase in cases deriving from military

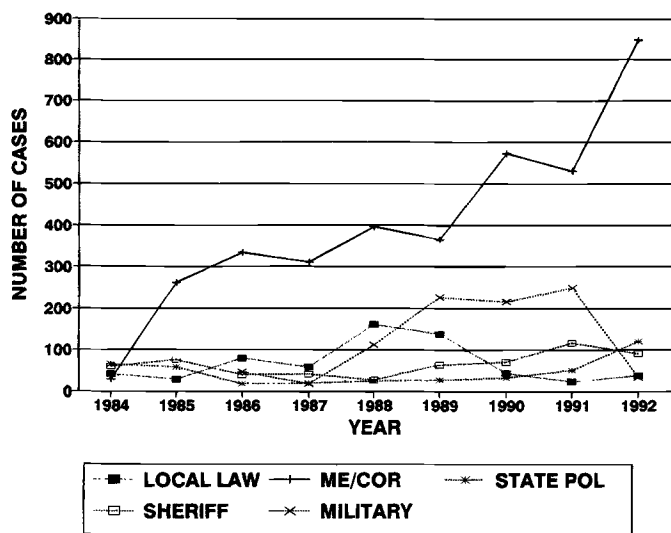


FIG. 2—Number of cases reported by ABFA diplomates by source agency, 1984-1992 (local law enforcement agencies, sheriffs' departments, medical examiner/coroner systems, state police agencies, and the military).

sources during the period 1989 through 1991, with totals over 200 being reported for these years. There is a sharp decline in 1992, with only two diplomates reporting a total of 34 cases. This no doubt reflects the situation at the U.S. Army Central Identification Laboratory-Hawaii (CILHI), where there is currently no Board certified anthropologist on staff. (Data are unavailable prior to 1986.)

Figure 3 presents data on civil cases. Diplomates were involved in few civil cases prior to 1989, the number never exceeding 35. The sharp increase after 1989 is strongly influenced by the work of one diplomate frequently involved in the analysis of aviation disasters. There were 267 civil cases reported in 1992. (Data are unavailable prior to 1986.)

Cases by Geographic Source

Figure 4 demonstrates geographic trends between 1984 and 1992. Diplomates consistently report the greatest number of cases

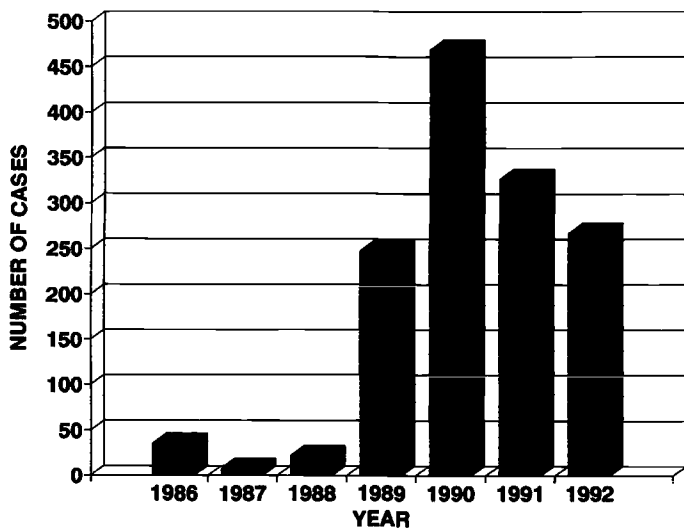


FIG. 3—Number of civil cases reported by ABFA diplomates, 1986-1992. (Data are unavailable prior to 1986.)

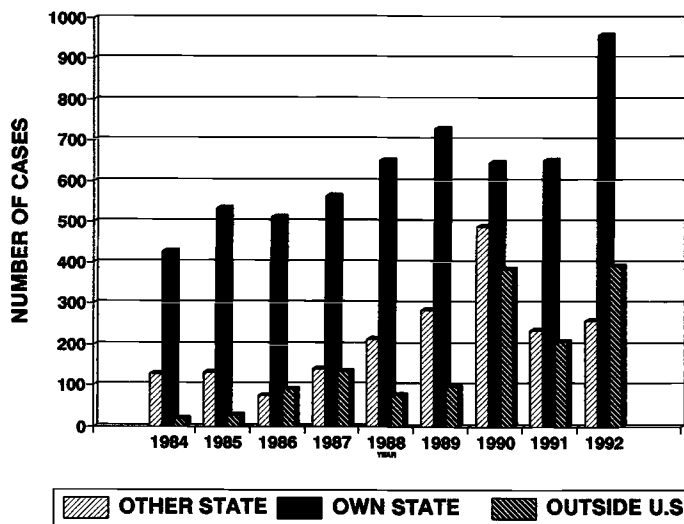


FIG. 4—Number of cases reported by ABFA diplomates by geographic source, 1984-1992.

as coming from their home states. This number increased from 426 in 1984 to 957 in 1992, an increase of 124%. Totals derived from other states or provinces rose from 127 in 1984 to 258 in 1992, an increase of 103%. The number of foreign cases rose sharply beginning in 1990. In 1984 diplomates reported 18 foreign cases. Involvement outside the U.S. fluctuated, but never exceeded 150 cases until 1990. Totals of 383, 206 and 391 were reported for 1990, 1991 and 1992, respectively. While foreign cases accounted for 3% of diplomate work in 1984, it made up 24% in 1992.

Cases by Type

Figure 5 illustrates trends in case types reported by diplomates. Several patterns are evident. The greatest number of cases are skeletal. This category shows a marked increase between 1984 and 1992. There has been a moderate increase in the number of fresh, decomposed and burned body cases. There has been little change in the number of mummified body and isolated skull cases.

In 1984 diplomates reported 102 cases involving decomposed bodies. By 1992 the total had risen to 140, an increase of 37%. The peak (251 cases) in 1991 reflects the involvement of one diplomate in identifications arising from Operation Desert Storm.

Diplomates reported 26 fresh body cases in 1984, 136 in 1992. This represents an increase of 423%. The peak in 1990 ($n = 241$) is due to two diplomates who reported 80% of the total. It is largely the result of casework deriving from one aviation disaster.

The number of mummified body cases has never exceeded 20. Totals rose from 14 in 1984 to 20 in 1992, a 43% increase. The number of burned body cases rose from 45 in 1984 to 154 in 1992, an increase of 242%. The peak ($n = 324$) in 1990 is strongly influenced by the involvement of one diplomate in the analysis of victims of an air crash (247 cases, or 76% of the total number of cases reported).

Skeletons make up the largest single category of diplomate case types. There has been a steady increase (with a slight dip in 1991) from 219 in 1984 to 670 in 1992. This represents an increase of 205%. The number of isolated skull cases has never been high, rising from 52 in 1984 to peaks of 102 and 104 in 1990 and 1991.

In 1992 there were 84 cases. (There are no data for skull cases for 1986.)

Procedures

Certain trends are also evident with regard to the kinds of procedures being utilized by forensic anthropologists. As Fig. 6 shows, dental identifications numbered 28 in 1985, 38 in 1986, then dropped off in frequency until 1992. One hundred and three were reported in 1992, all but two of which were done by two individuals. Most anthropologists are leaving dental identifications to the odontologists.

Specialized techniques such as facial reconstruction, photographic superimposition and photographic comparison have never been reported with great frequency (Fig. 7). The number of facial reconstructions fluctuated between a low of 5 in 1987 and a high of 31 in 1985. Fourteen were performed in 1992.

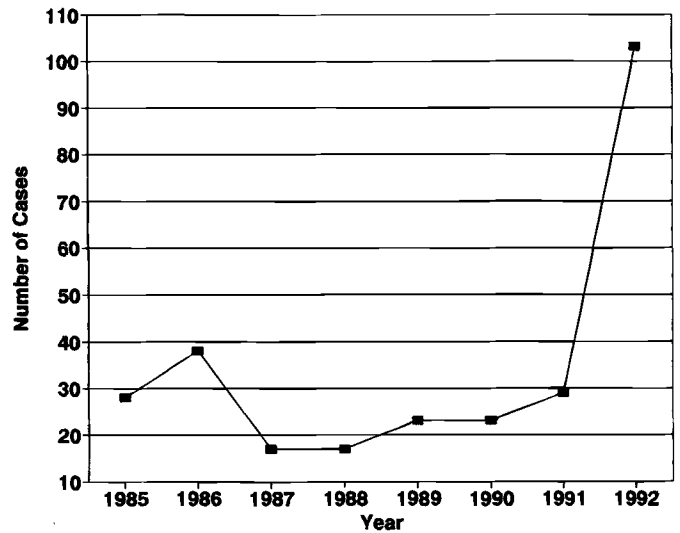


FIG. 6—Number of dental identifications reported by ABFA diplomates, 1985-1992. (Data are unavailable prior to 1985.)

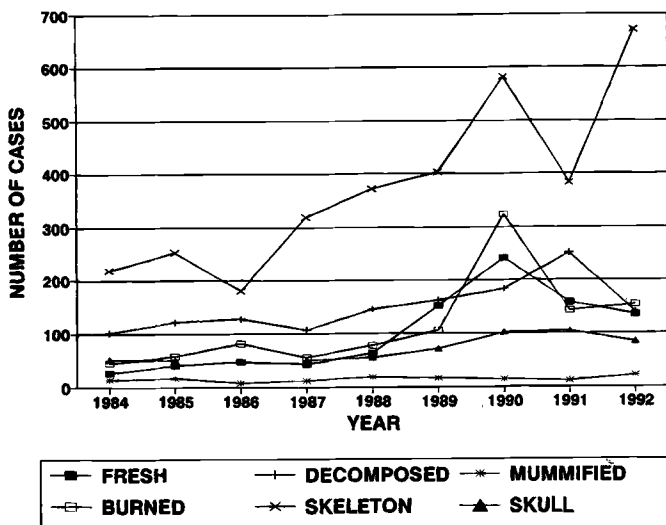


FIG. 5—Number of cases reported by ABFA diplomates by case type, 1984-1992.

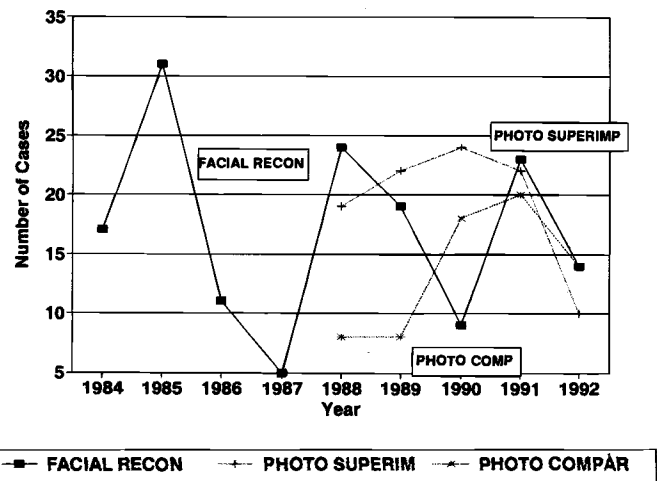


FIG. 7—Number of cases involving facial reconstruction, photographic superimposition and photographic comparison reported by ABFA diplomates, 1984-1992. (Data for superimpositions and comparisons are unavailable prior to 1988.)

Data for photographic superimpositions and comparisons are unavailable prior to 1988. The number of superimpositions fluctuated between a low of 10 (1992) and a high of 24 (1990) cases. Totals for photographic comparisons varied between 8 (1988, 1989) and 20 (1991) cases. All three procedures show a drop in 1992.

Both dental and bone microscopic aging have waned in popularity over the past eight years (Fig. 8). Only 1 microscopic dental aging procedure has been reported since 1985. Microscopic bone aging was done five times in 1984, peaked at 15 in 1985, then dropped to three in 1992.

The number of crime/crash scene searches done by diplomates has increased since 1985 (Fig. 9). Forty-two searches were reported in 1985, 99 were reported in 1992, an increase of 135%. The peaks in 1987 and 1988 may be due to the involvement of diplomates in CILHI activities. The high number ($n = 151$) in 1991 is attributable to four diplomates who accounted for 76% of the total scene searches reported.

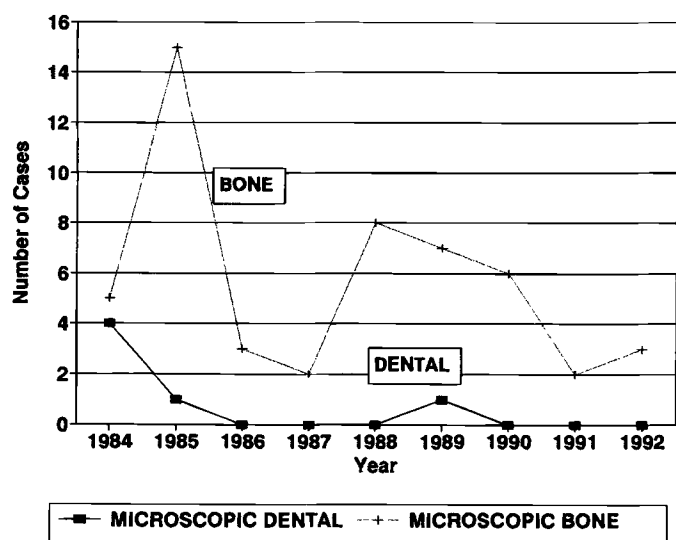


FIG. 8—Number of cases involving microscopic dental and microscopic bone aging procedures reported by ABFA diplomates, 1984-1992.

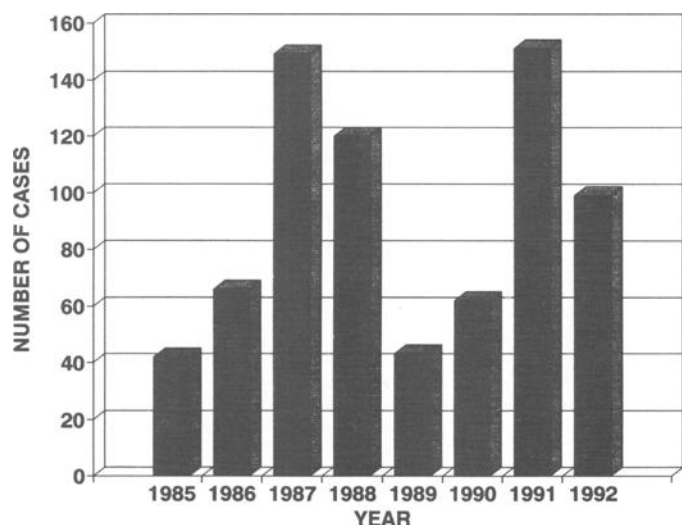


FIG. 9—Number of crime and crash scene recoveries reported by ABFA diplomates, 1985-1992. (Data are unavailable prior to 1985.)

Overview: 1992

The following analysis of professional activity for 1992 is based on information provided by 38 out of 39 individuals who are currently recognized as diplomates of the American Board of Forensic Anthropology. This represents a response rate of 97%.

Cases by Source Agency

Diplomates reported a total of 1630 cases for 1992. Of these, 1606 could be identified by source agency. Figure 10 illustrates the percentage of cases derived from medical examiner/coroner offices, civil sources, state police, sheriff's departments, local law enforcement agencies and the military. Table 1 provides information on the percentage of cases derived from each source agency, the total number of cases reported for each category, the number of diplomates reporting in each category, and the lowest and highest number of cases reported by any one diplomate for each category (range). It is clear that there is tremendous variation in the level of involvement among diplomates.

Twenty-six diplomates reported 848 cases as coming from medical examiner/coroner systems. This represented the largest category, making up 60.8% of all cases reported. Totals ranged from a minimum of 1 to a maximum of 146 cases per diplomate.

The second largest source of case work was the civil category. Figures presented are the sum of numbers reported for the "defense," "plaintiff," "private," "insurance companies," and "other" categories which first appeared on the 1990 update form. For this reason it is not possible to calculate percentages of diplomates reporting for the composite figure. Diplomates reported as few as one and as many as 141 civil cases.

A total of 119 cases, or 8.5%, were drawn from state or provincial police agencies. Thirteen diplomates reported this as a source of casework. They reported a minimum of 1 and a maximum of 66 cases. (Thus, one diplomate accounted for 55% of this category.)

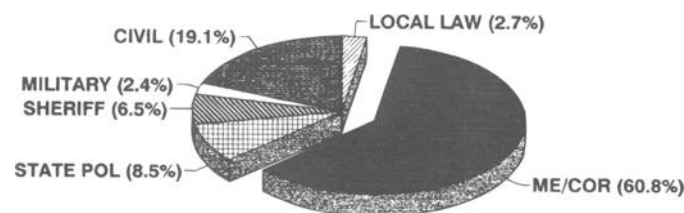


FIG. 10—Percentage distribution of cases by source agency reported by ABFA diplomates for the year 1992.

TABLE 1—Cases reported by source agency by ABFA diplomates for the year 1992.

Cases by source agency: 1992				
Source Agency	% of Cases	Total Cases	Diplomates Reporting	Range
ME/Coroner	60.8	848	26	1-146
Civil	19.1	267	...	1-141
State Police	8.5	119	13	1-66
Sheriff	6.5	90	19	1-14
Local Law Enf.	2.7	37	13	1-11
Military	2.4	34	2	7-27

^aAddition of figures reported would cause artificial inflation since some diplomates report cases from more than one of the sources comprising this category. For specifics see Table 2.

Nineteen diplomates listed sheriffs' departments as sources of casework. Ninety cases represented 6.5% of the total. Individual reports ranged from 1 to 14 cases.

Local law enforcement agencies provided 2.7% of the casework in 1992, or 37 cases. Thirteen diplomates reported this as a source. One diplomate reported eleven cases, thus accounting for approximately 30% of the total.

The military accounted for only 2.4% of the cases reported in 1992. Only two diplomates listed this as a source, accounting for a total of 34 cases.

Civil Cases

Diplomates reported having consulted on 267 civil cases in 1992. Table 2 provides statistics on the sources of casework in this category. Here, too, the caseloads are not evenly distributed.

The largest source, 61.8%, was plaintiffs' attorneys, with eight diplomates reporting a total of 165 cases. One individual reported 135 or 82% of this total.

The next largest category was that designated "other." It is difficult to define these cases. Specific reference to source agency was made in only a few instances, including the Catholic Church, a Native Band Council and an engineering firm. Eight diplomates reported 42 cases, or 15.7% of the total.

Defense attorneys employed 12 diplomates in 32 cases, or 12% of the total. Private families accounted for 9% or 24 cases, employing 11 diplomates. Insurance companies provided four cases to three diplomates, making up 1.5% of the total civil casework in 1992.

Cases by Geographic Source

Diplomates reported a total of 1606 cases which could be identified by geographic source. Figure 11 illustrates the distribution of cases derived from the home state or province of a diplomate, cases derived from other states or provinces, and cases derived

from outside the U.S. Table 3 provides data on the geographic sources or diplomate casework.

Thirty-five diplomates reported a total of 957 cases, or 59.6%, as drawn from their home states or provinces. Twenty-two diplomates reported a total of 258 cases from other states or provinces, making up 16.1% of the total. Caseloads ranged from 1 to 90. Seven diplomates reported a total of 391 cases in foreign countries, or 24.3% of all cases. Three diplomates accounted for 337 cases, or 97% of all non-U.S. cases. One individual reported a foreign caseload of 220. While most diplomates are engaged in casework originating locally, a small number of diplomates account for the bulk of the foreign work being done.

Non-forensic Cases

A total of 428 cases initially presented as forensic turned out to be prehistoric or historic human remains, or non-human (Fig. 12). This represents 26% of all cases reported. Table 4 provides statistics for this category.

Twenty-nine diplomates reported 157 cases which turned out to be animal remains. This represents 36.7% of all non-forensic cases. Numbers reported ranged from 1 to 19.

Two hundred and nine cases, or 48.8%, were historic human remains. One of the 21 diplomates reporting in this category listed 137 cases from an historic cemetery analysis, or 66% of the total. This may have artificially inflated the totals for this category.

Sixty-two cases, or 14.5% were prehistoric human remains.

TABLE 3—Cases reported by geographic source by ABFA diplomates for the year 1992.

Cases by geographic source: 1992				
Region	% of Cases	Total Cases	Diplomates Reporting	Range
Own State/Province	59.6	957	35	1-147
Outside U.S.	24.3	391	7	1-220
Other State/Province	16.1	258	22	1-90

TABLE 2—Civil cases reported by source agency by ABFA diplomates for the year 1992.

Civil cases: 1992				
Source Agency	% of Cases	Total Cases	Diplomates Reporting	Range
Plaintiff	61.8	165	8	1-135
Other	15.7	42	8	1-18
Defense	12.0	32	12	1-18
Private (families)	9.0	24	11	1-4
Insurance Co.	1.5	4	3	1-2

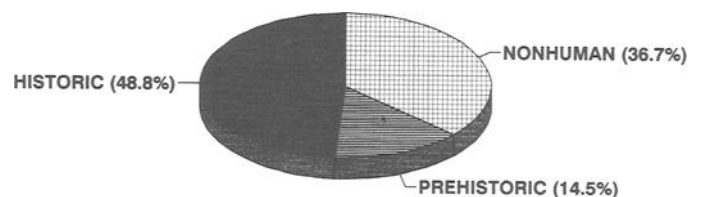


FIG. 12—Percentage distribution of non-forensic cases by type reported by ABFA diplomates for the year 1992.

TABLE 4—Non-forensic cases reported by type by ABFA diplomates for the year 1992.

Non-forensic cases: 1992				
Case Type	% of Cases	Total Cases	Diplomates Reporting	Range
Historic	48.8	209	21	1-137
Non-human	36.7	157	29	1-19
Prehistoric	14.5	62	21	1-10

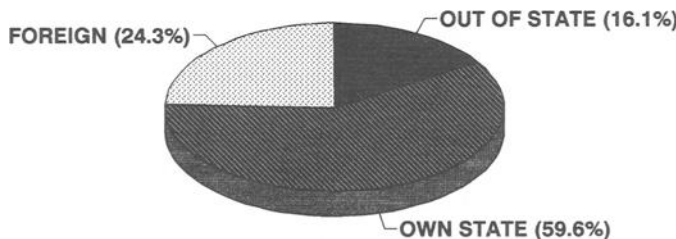


FIG. 11—Percentage distribution of cases by geographic source reported by ABFA diplomates for the year 1992.

Twenty-one diplomates reported numbers ranging from 1 to 10 cases.

Cases by Type

In 1992 diplomates reported 1204 forensic cases which could be categorized by type. Figure 13 illustrates these cases by percentage of the total. Table 5 provides statistics for this category.

A total of 670, or 55.6% of these cases were skeletons. Twenty-eight diplomates reported caseloads ranging from 1 to 222. One diplomate reported 222 skeletal cases, comprising 33% of this category.

A total of 154, or 12.8% were burned bodies. Seventeen diplomates reported caseloads ranging from 1 to 31. One hundred and forty, or 11.6% were decomposed bodies. Twenty-four diplomates reported caseloads ranging from 1 to 23 cases. One hundred and thirty-six, or 11.3% were fresh bodies. Fourteen diplomates reported caseloads ranging from 1 to 15. Eighty-four, or 7.0% were isolated skulls. Twenty-three diplomates reported caseloads ranging from 1 to 13. Twenty, or 1.7% were mummified bodies. Ten diplomates reported caseloads ranging from 1 to 6.

Court

Diplomates were frequently involved with the courts in 1992. Table 6 provides figures for the types of court activities in which diplomates engaged, their appearances for the defense or the plaintiff/prosecution, their participation in criminal or civil cases, and their expertise with regard to identification or trauma analysis.

Thirteen diplomates were submitted to 64 depositions, one individual as frequently as 26 times. Twelve diplomates testified a total of 46 times, one as frequently as 21 times. Fifteen diplomates submitted 214 written reports. One hundred and eight of these were reported by one individual. This may reflect differences of opinion as to the meaning of the category, or differences in jurisdictional preference.

Figure 14 illustrates the distribution of court activities among

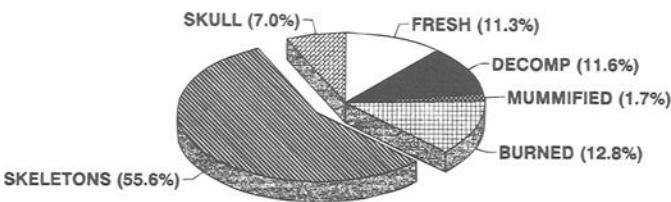


FIG. 13—Percentage distribution of forensic cases by type reported by ABFA diplomates for the year 1992.

TABLE 5—Forensic cases reported by type by ABFA diplomates for the year 1992.

Forensic cases by type: 1992				
Case Type	% of Cases	Total Cases	Diplomates Reporting	Range
Skeletal	55.6	670	28	1-222
Burned	12.8	154	17	1-31
Decomposed	11.6	140	24	1-23
Fresh	11.3	136	14	1-15
Isolated skull	7.0	84	23	1-13
Mummified	1.7	20	10	1-6

TABLE 6—Court activities reported by ABFA diplomates for the year 1992.

Court activities: 1992			
Activity	Total Cases	Diplomates Reporting	Range
Deposition	64	13	1-26
Testimony	46	12	1-21
Written report	214	15	1-108
Defense	14	11	1-4
Prosecution/Plaintiff	69	16	1-21
Criminal	46	14	1-9
Civil	36	6	1-21
Identification	33	13	1-7
Trauma	41	8	1-21

diplomates. Eleven diplomates were employed by the defense a total of 14 times, or in 16.9% of the cases reported. Sixteen diplomates were employed by the prosecution or plaintiff for a total of 69, or 83.1% of cases.

Thirteen diplomates provided expertise in identification a total of 33 times, or in 44.6% of cases reported. Eight diplomates provided expertise in trauma analysis 41 times, or in 55.4% of cases. One individual reported testifying with regard to trauma in 21 cases, or 51% of the total for this category.

Diplomates were involved in criminal cases 56.1% of the time, and civil cases 43.9%. Fourteen diplomates were in criminal court 46 times. Six diplomates went to court 36 times for civil matters.

Conclusions

The data submitted each year by the diplomates of the American Board of Forensic Anthropology allow periodic analysis of trends within the field. They permit an inspection of diachronic change, and an evaluation of synchronic patterning. Reports for the years 1984 through 1992 allow several generalizations:

1. The last eight years have seen a tremendous increase in the caseloads of Board certified forensic anthropologists.

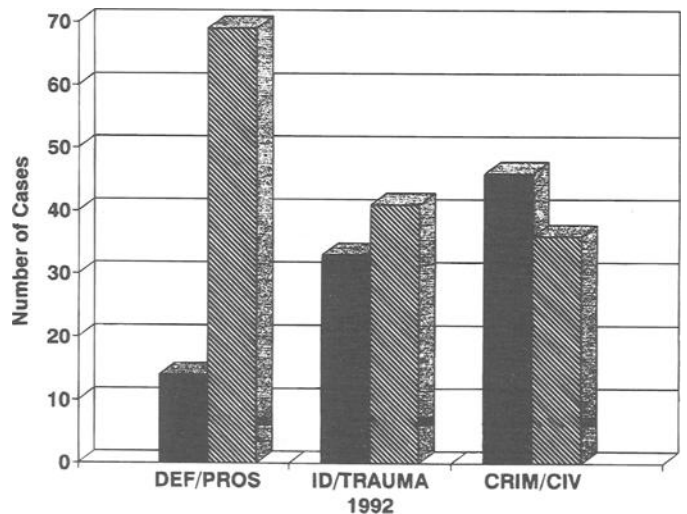


FIG. 14—Number of court cases reported by ABFA diplomates for the year 1992: appearances for the defense versus the prosecution/plaintiff; testimony involving identification versus trauma analysis; criminal versus civil cases.

2. The sources of casework have changed, with the most dramatic growth occurring in work originating in medical examiner/coroner systems.

3. Members of the profession have become actively involved in consultations for civil suits.

4. Geographically, most practicing anthropologists still draw the bulk of their work from their home states and provinces. Nevertheless, there has been a marked increase in the amount of casework done outside the U.S.

5. While the most frequently reported case type is still skeletal, anthropologists are regularly consulted in cases involving burned, decomposed, mummified and fresh bodies.

6. Some techniques and procedures are being used more often, others are declining in frequency, or disappearing altogether.

7. One of the most striking areas of growth is in trauma analysis. Anthropological expertise are being requested with increasing frequency in cases exhibiting skeletal injury or mutilation.

8. Certified forensic anthropologists appear regularly in court. They are called more often as experts for the prosecution or plaintiff than for the defense, and they participate in more criminal than civil cases. In court they are involved more frequently with questions of trauma than with those concerning identification.

In 1982 Snow challenged:

"Although skeletal identifications will undoubtedly continue to provide the major part of the caseload of forensic anthropol-

ogists, experts should also be willing to come out of their bone closets and serve the criminal justice system to their fullest as *human biologists*" [3].

The data submitted by Board certified forensic anthropologists over the past eight years suggest that this challenge is being met. Forensic anthropology is a robust field, growing and expanding. Its practitioners are involved in a proliferating number of areas in which knowledge of human biology, and the musculoskeletal system in particular, is essential. Forensic anthropology has become an integral element in most medico-legal systems, and a recognized part of the forensic science network.

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